e-Link First Time User Guide

PART 1

- **System Overview**
  - SYSTEM REQUIREMENT.....pg 3
  - Software Specification……..…..pg 3
  - Demo Kit ……..pg 4
  - Hardware Pre-setup……....pg 5

PART 2

- **SOFTWARE INSTALLATION & SETUP**
  - Install the software……..…..pg 6~9
  - By Passing Firewall……...……pg 10~12
  - Setting Up Server's IP Address ……..pg 13~15
    - In Windows XP……..pg 13~14
    - In Windows Vista……..pg 15
  - Setting Up EC Server Agent……..…..pg 16~18
  - Set Daylight Saving Time rules ……pg 19~20
  - Initialize Programmer……..pg 21~22

PART 3

- **SETUP WALL CONTROLLER & WALL READER**
  - Issue Door No. card……pg 23~24
  - Hardware setup……...pg 25~27

- Setup IP & Timezone data for controller……pg 28~29
- Create User Card……..pg 30~31
- Setup User Timezone……pg 32
- Setup Locking Plan……pg 33~35

- **SETUP THE LOCK**
  - Creating Locks……pg 36~37
  - Setup lock's Locking Plan……..pg 38
  - Write Settings from PC to Programmer……pg 39
  - Write Settings from Programmer to the lock……pg 40~41

PART 4

- **Updating settings through Wall Reader by User Card**
  - Testing the lock with User Card……pg 42
  - Checking Audit Trail Report……pg 43

PART 5

- **Frequent Asked Questions**……....pg 44~50
  - About Controller
  - About Wall Reader
  - About Software
  - About Programmer
  - About Cylinder

e-Link First Time User Guide

Part 1: System Overview

System Requirement

- OS: Microsoft Windows 2000/XP/Vista/7
- CPU: Intel Pentium 1.0 GHz+ or AMD Athlon 1000+
- RAM: 512MB
- Hardisk space: 100MB
- CD-ROM or DVD-ROM
- Resolution: 1024*768
- Minimum USB Port: 1
- Ethernet Card (for connection between PC and Wall Controller)
- Ethernet connection is a requirement

Software Specification

- Supports up to 64,000 doors / 64,000 users.
- Support Daylight Saving Time.
- Time **z**one: 200 time zones, each time zone consists of 12 periods.
- Setup User & Door Locking Plan
- Easily Setup User and Visitor profile.
- Locks can be easily programmed or updated by both Programmer tools or User Cards.
- Events & Audit Trail report
- Low power warning when battery is low for the lock.
- Calendar function
- Day Light Saving function
- Authorization of System User Management
- Import & Export function

Demo Kit

If you have purchased the e-Link demo kit from WaferLock. The demo kit on your hand should be look like this in the following. Please note the power adaptor (DC12v) does not include in the demo kit.

Inside the kit box, you will find the following parts list:

- 1 Controller
- 1 Wall Reader
- 2 cylinders
- 1 programmer
- 1 blue RJ-45 crossover ethernet cable.
- 1 black USB cable, 1 white USB cable.
- 6 LR-1 cylinder batteries, 3 AAA programmer batteries.
- 5 Mifare Card
- 1 External power supply
- 2 cylinder screw, 2 hexagan screw driver.

Hardware Pre-setup

1. Please have the controller connected with a DC12v power adaptor. (The black cable in the example below is the adaptor)
2. Connect the blue ethernet cable we provided from the demo kit with Controller and another end to the computer.

3. Please note the computer you choose to work with e-Link system must have a RJ-45 connector in order to work with the controller.

Note: when the ethernet cable is disconnect from computer to controller, the EC Server Agent will not be able to start up the EC Server service when computer starts up. Once the system is setup, please always have the computer connected with the controller with the ethernet cable.

Part 2 Software Installation & Setup

Install the software:

Please insert the e-Link CD to your CD-ROM. The installation screen should be poped up. If you have the e-Link file downloaded from internet, please double click on the setup file to begin the following installation.

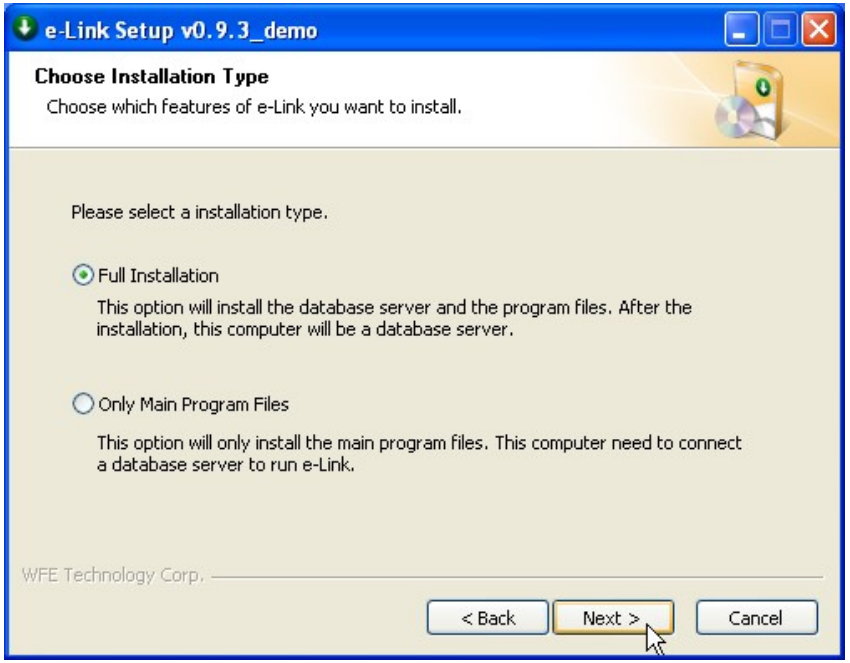
Install Procedure:

1. Select the installing language for your own working environment.

2. Click Next to proceed.

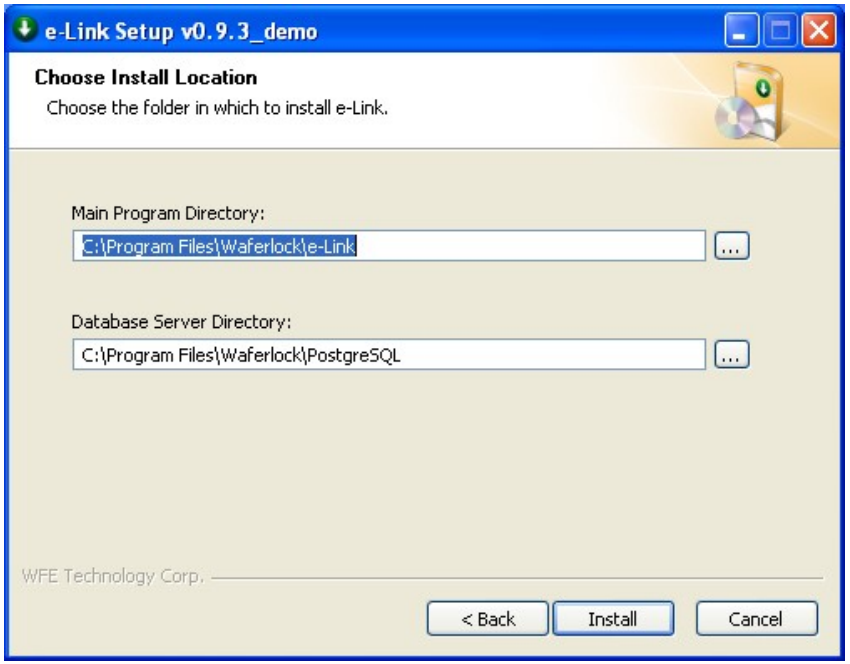
e-Link Setup v0.9.3_demo
Welcome to the e-Link Setup Wizard
This wizard will guide you through the installation of e-Link.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

3. Choose **Full Installation** or **Only Main Program Files**, then click Next to proceed.

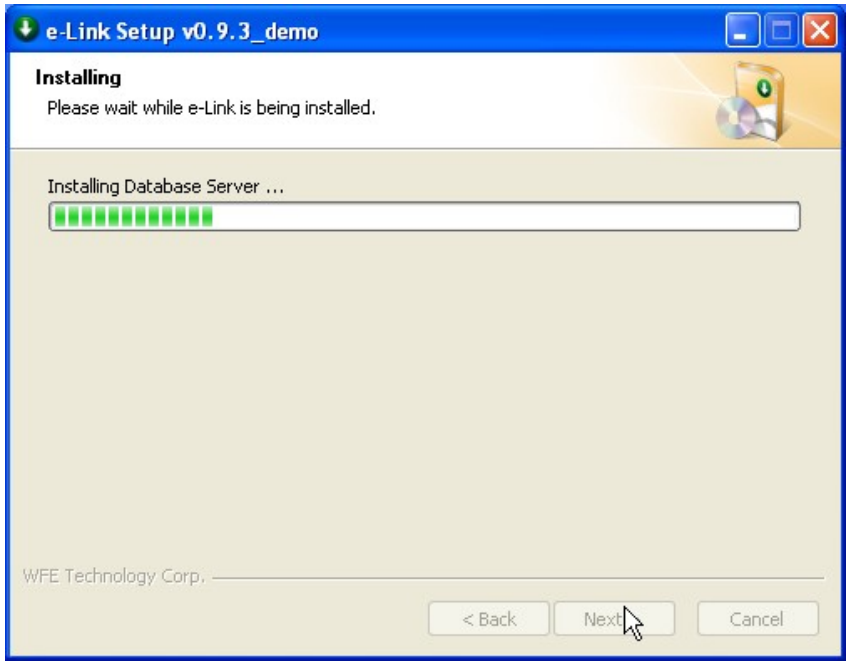

e-Link Setup v0.9.3_demo
Choose Installation Type
Choose which features of e-Link you want to install.
Please select a installation type.
Full Installation
This option will install the database server and the program files. After the installation, this computer will be a database server.
Only Main Program Files
This option will only install the main program files. This computer need to connect a database server to run e-Link.
WFE Technology Corp.
< Back
Next >
Cancel

***If you are installing the e-Link system the first time, please choose Full Installation.**

4. Choose the path for the installation, then click Install.

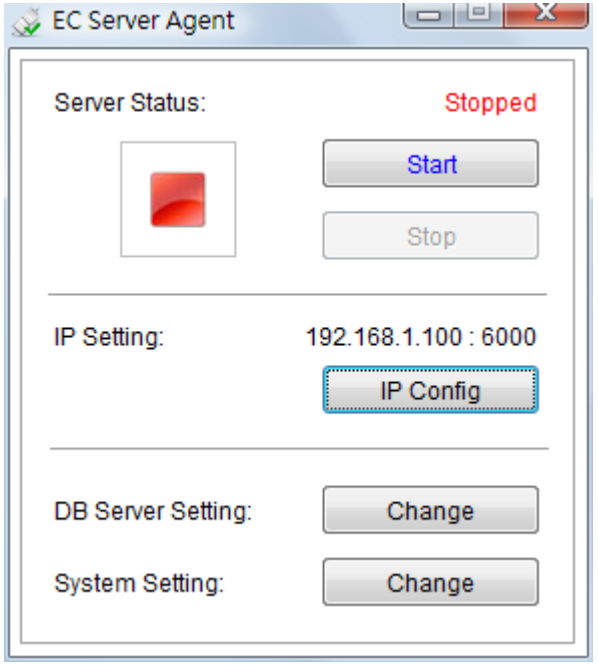


5. Wait until the program finishes installation.



6. Click Finish icon to complete the Setup Wizard.

7. When finishing setup e-Link software, EC Server Agent will boot up automatically. Please minimize this program first, and follow the procedure below to continue.



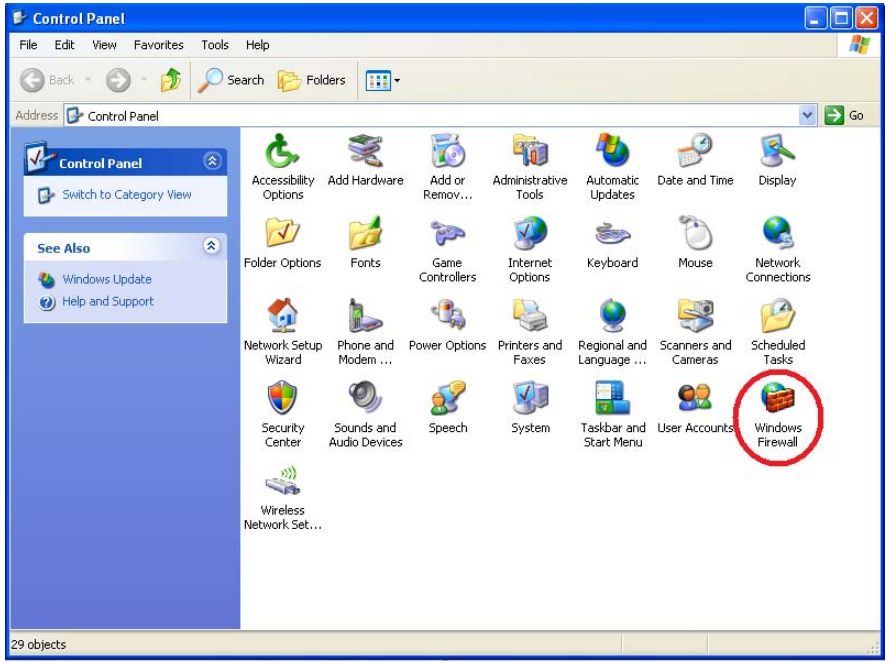
Please use the login ID: admin , password: admin to login the software after finished installation.

Bypassing the Firewall:

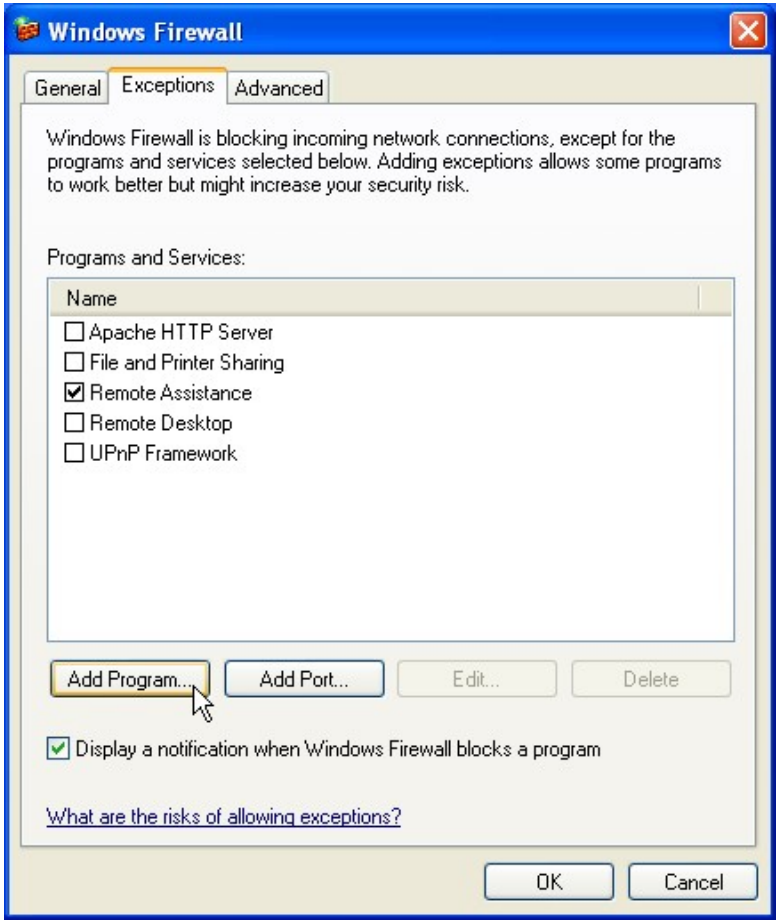
The protocol of communication for e-Link is based on TCP/IP network. In order to avoid any firewall blocking to the system, it is necessary to add e-Link Networking System into the firewall Exceptions list. Please note there are many different kinds of firewall softwares available in the market, if your anti-virus program contains functions of firewall, please make sure to add e-Link programs into its exception list. For Windows Firewall, please follow the procedure to bypass the e-Link software.

In Windows XP Setting

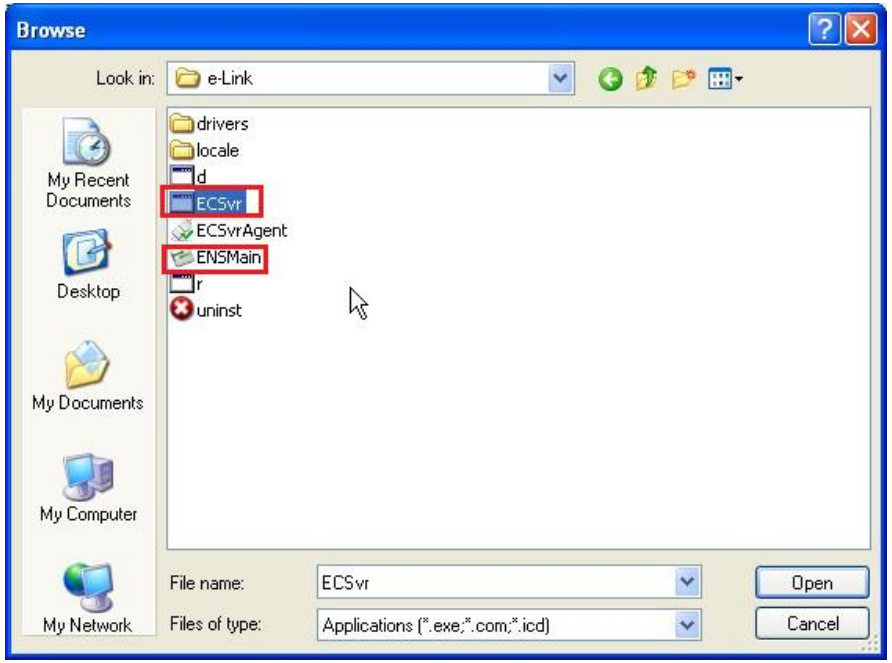
1. Open up Windows Firewall from the Control Panel.



2. Click Exceptions tab, and click Add Program.

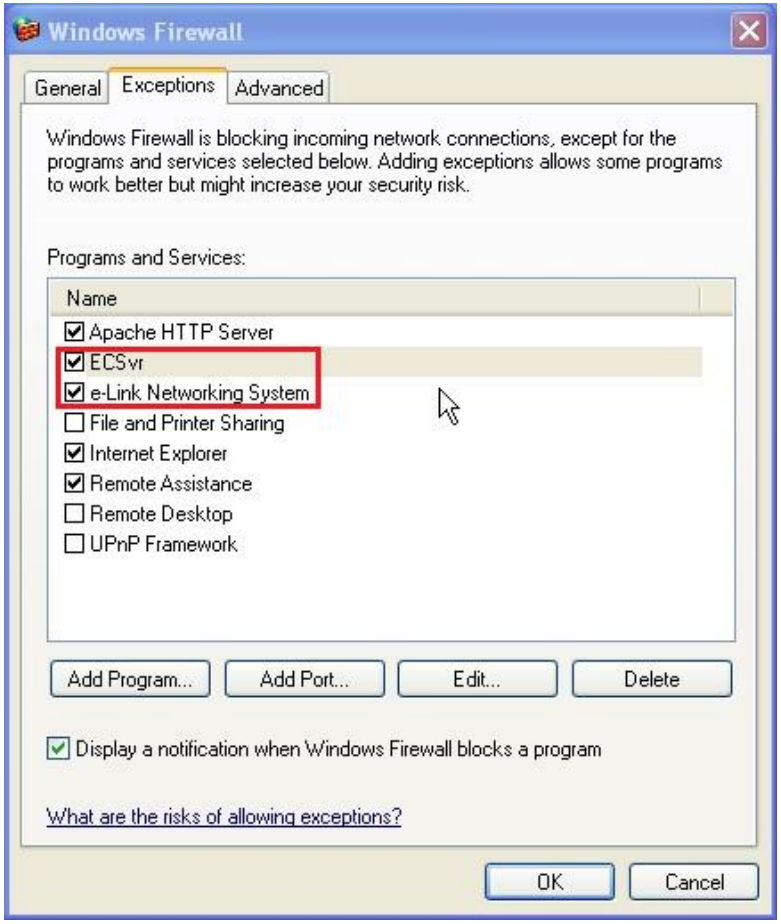


3. Go to **C:\Program Files\Waferlock\e-Link**, and select **ECSvr and ENSMAIN** then Click open..



4. Make sure **ECSvr and ENSMAIN** is included in the list and checked, then click OK.

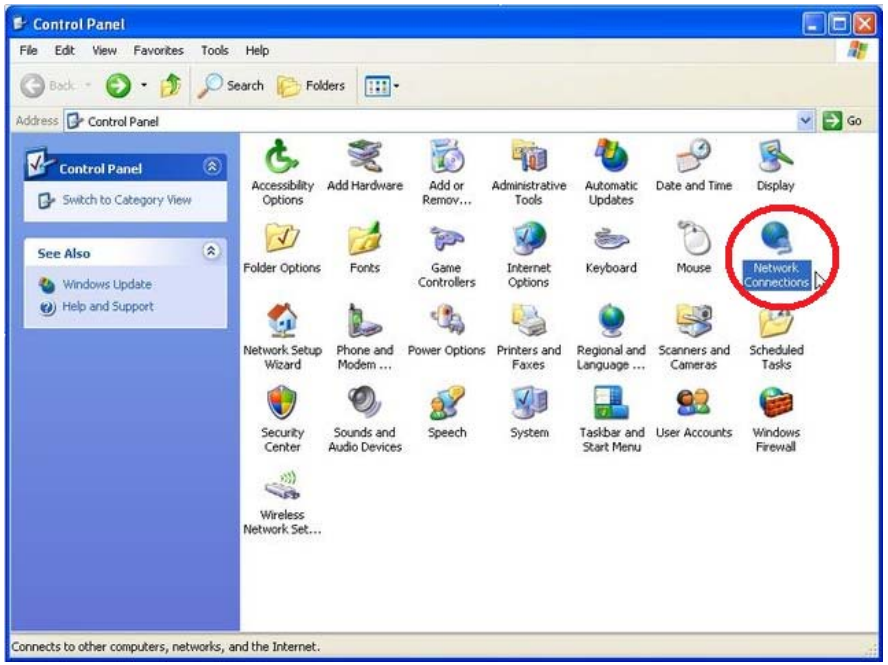
** please note ENSMAIN display as "e-Link Networking System" in Windows Firewall.*



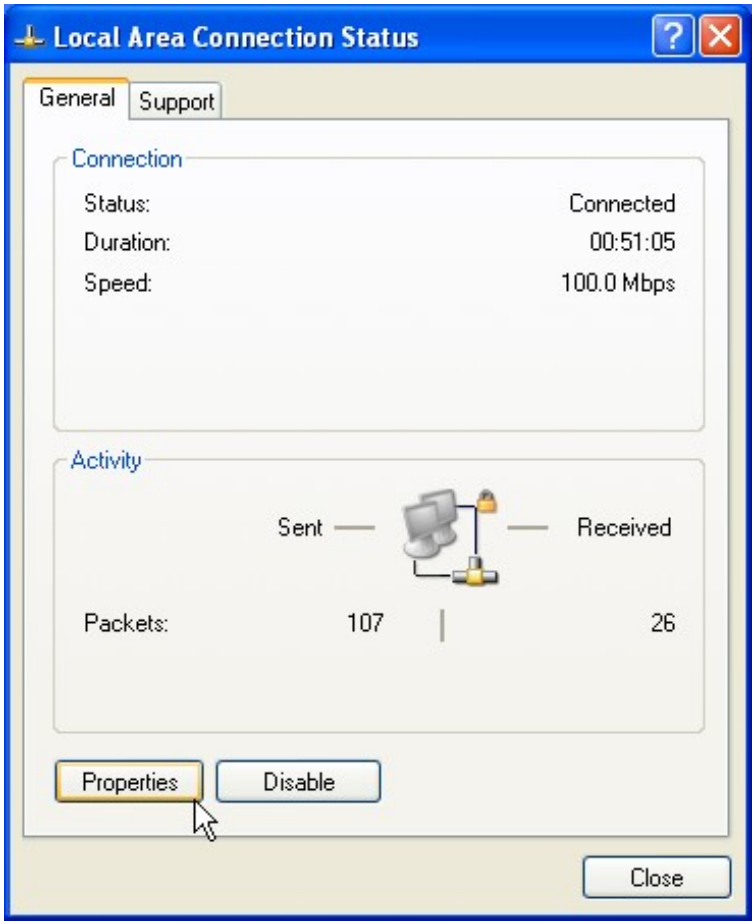
Setting Up Server's IP addres

In Windows XP Setting

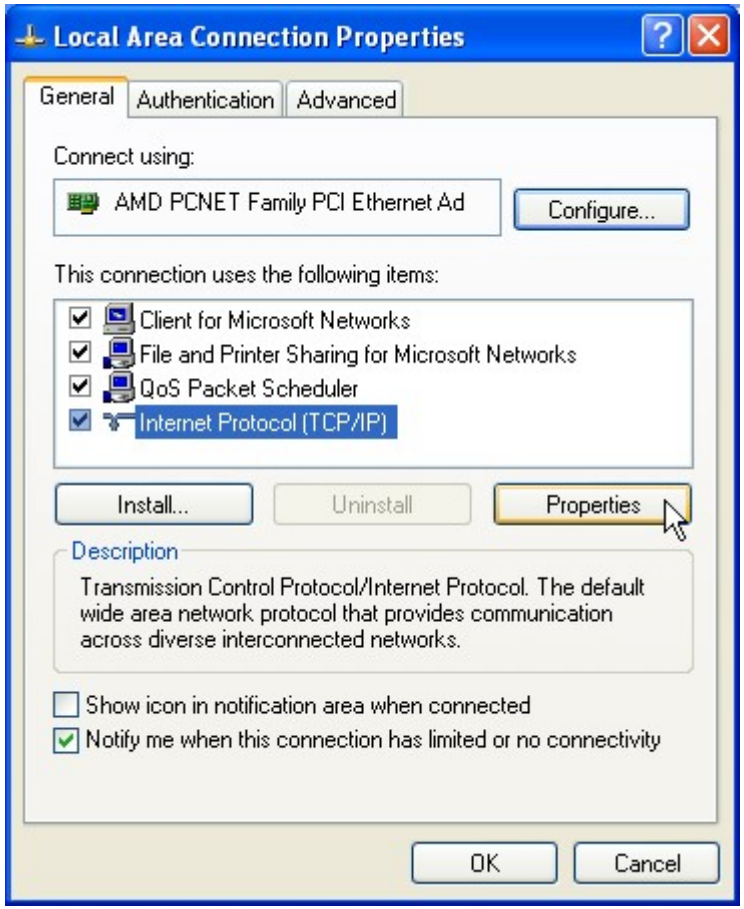
1. In Control Panel, open up **Network Connections**.



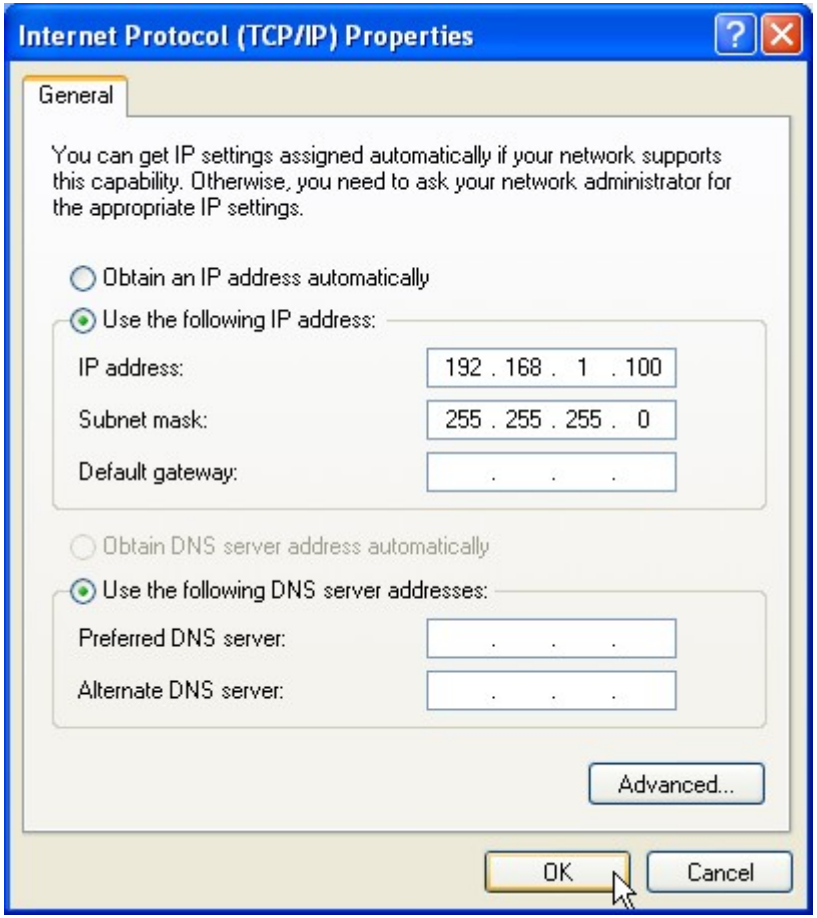
2. Open **Local Area Connection**.



3. Choose **Internet Protocol (TCP/IP)**, and click **Properties**



4. According to your network setup, enter the IP for your computer. (***Following example IP address & Subnet mask is for reference only***) Click OK to finish IP setup.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 100
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

In Windows Vista setting:

IP setting:

1. Click **Start button**, click **Control Panel**, click **Network and Sharing Center,** and then clicking **Manage network connections.**

2. Right-click on **Local Area Nettwork** and then click **Properties**. Administrator permission is required if you are prompted for an administrator password or confirmation, type the password to provide confirmation.

3. Click the **Networking tab.** Click **Internet Protocol Version 4 (TCP/IPv4)** and then click **Properties.**

4. To specify IP address settings, do the following:

- To specify an IP address, click Use the following IP address, and then enter the IP address (192.168.1.100) Subnet mask (255.255.255.0). Leave the Default Gateway blank.

5. After setting up the IP and Subnet mask, click **OK** to finish.

Please note the IP address specified above is only for the purpose of this document. The network environment for most actual installation will not be the same.

Turn off UAC control:

1. Open User Accounts by clicking the Start button Picture of the Start button, clicking Control Panel, clicking User Accounts and Family Safety (or clicking User Accounts, if you are connected to a network domain), and then clicking User Accounts.

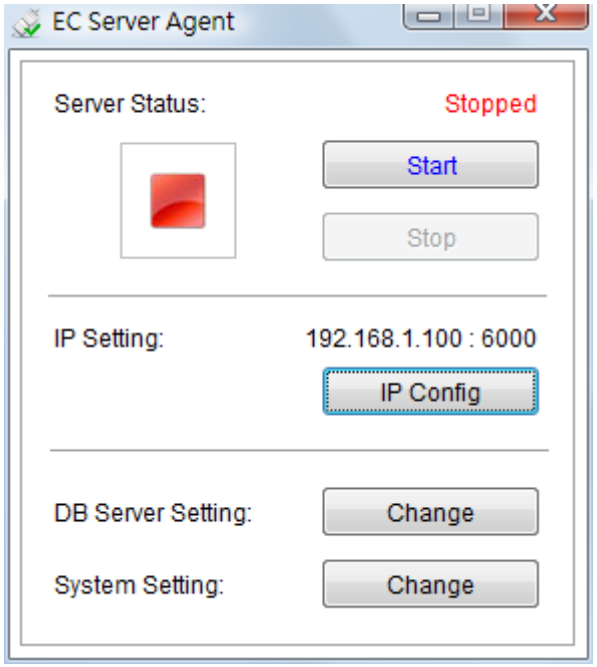
2. Click Turn User Account Control on or off. Administrator permission required If you are prompted for an administrator password or confirmation, type the password or provide confirmation.

3. Select the Use User Account Control (UAC) to help protect your computer check box to clear the check box to turn off UAC, and then click OK.

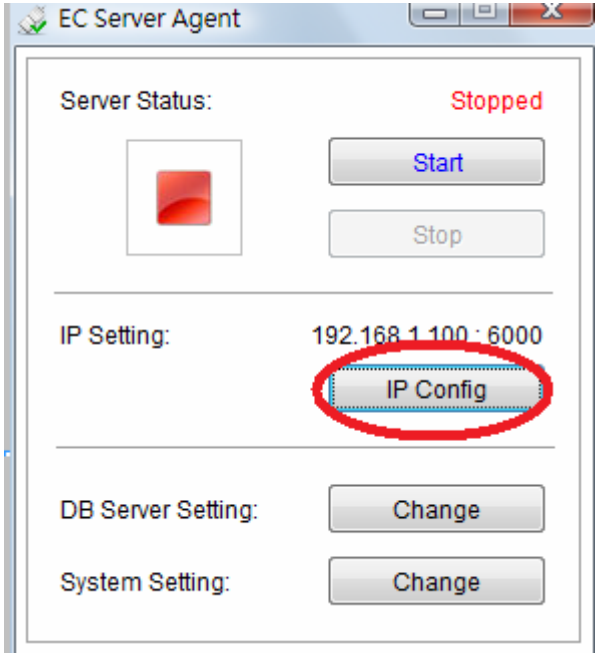
« Turn User Account Control On...
Search
Turn on User Account Control (UAC) to make your computer more secure
User Account Control (UAC) can help prevent unauthorized changes to your computer. We recommend that you leave UAC turned on to help protect your computer.
Use User Account Control (UAC) to help protect your computer
OK
Cancel

Setting Up EC Server Agent:

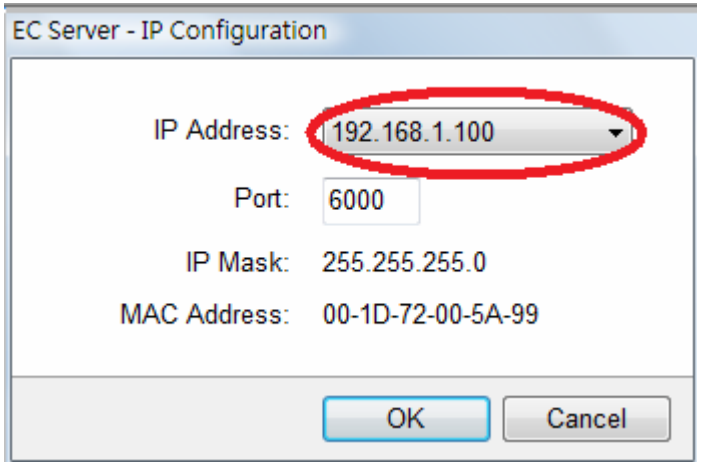
1. Open up EC Server Agent from bottom right corner of your Windows or go to Start > Program Files > e-Link > EC Server Agent to open it up.



2. Click **IP Config**.

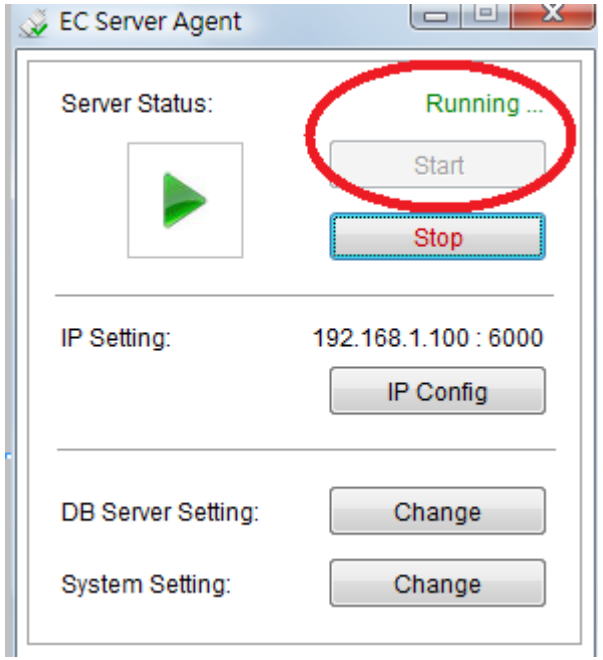


3. Select the IP from the list. The IP has to be the server's IP which you have setup before. Enter the Port according to your network environment. (***Following IP address and Port are example for reference only***) Click OK to finish.



Click here if there's no IP can be seen from this list.

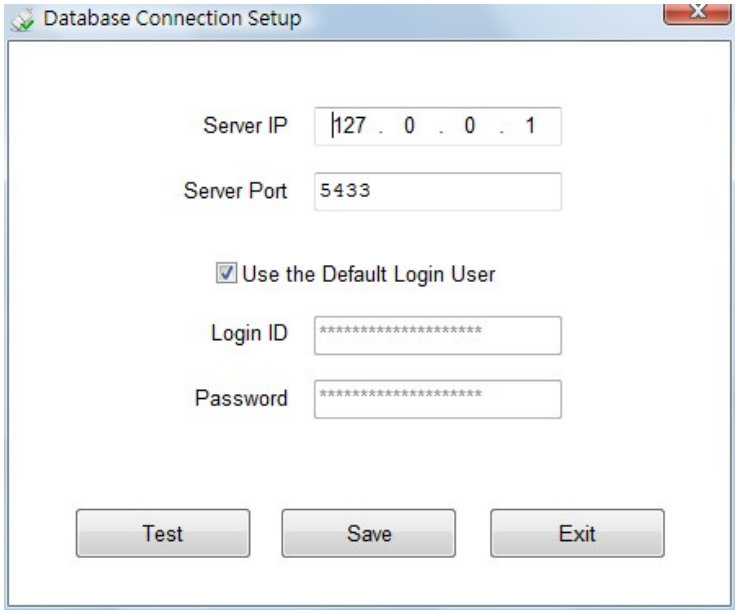
4. If the IP address and Port is correct, click **Start** to run the agent. Once the EC Server Agent is start to run, the server will be ready to receive and send data with the Wall Controller.



Note:

If EC Server Agent can not be running, please check:

- Check if there's any other firewall program that is blocking the **ECSvr** or **ENSMAIN** file and double check the **IP + Port** that you are using is correct.
- If you are working from a workstation computer rather than the server computer, please check if the Server PC you are connecting is not blocking the request.
- If you would like to keep EC Server Agent to load automatically, click on "Load on System Startup" in System Setting menu.
- The EC Server services will start automatically if the EC Server Agent is running in “Start” mode. Unless EC Server Agent is put to “Stop” mode, the EC server services will still be running even the EC Server Agent is not opened.
- Please note in network knowledge terms, the IP address “127.0.0.1” means redirect back to the PC you are using.



DB Server Setting: If the database is stored in remote Server PC, this menu is to enter the remote IP so that the database can be saved in the right PC.

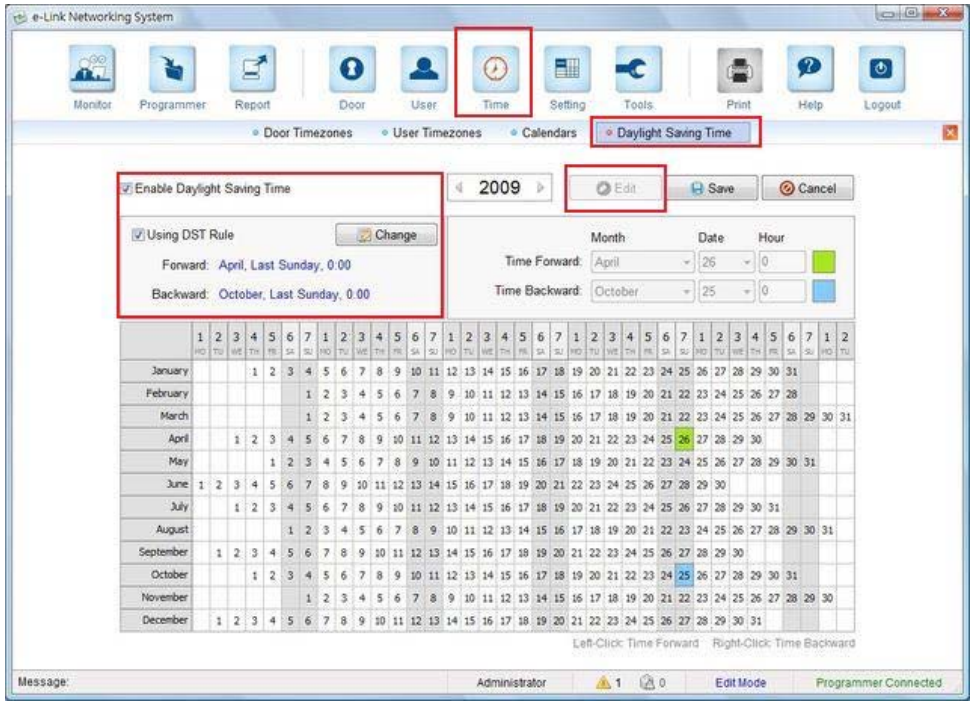
Test: Test button is to test if the connection is well between the computer you are connecting.

Save: To save the IP address, when next time boot up e-Link system, the agent will be connecting to the saved IP directly.

If problem occurs in this chapter, please **click here** for Database Connection Setup FAQ section.

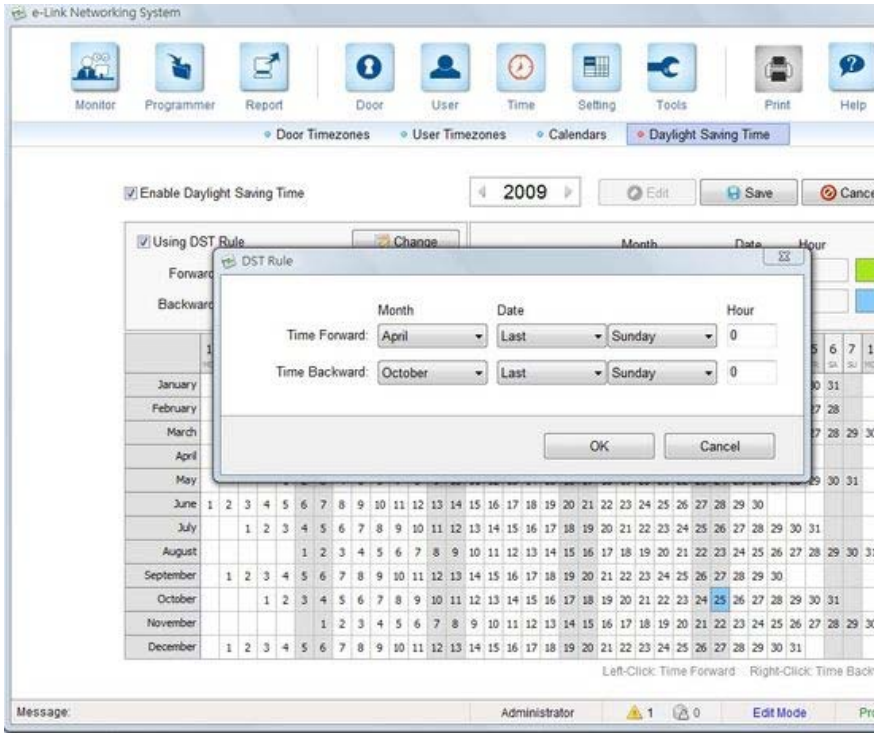
Setting Up “Daylight Saving Time” rule in the software.

1. Go to “Time > Daylight Saving Time”
2. Click “Enable Daylight Saving Time”
3. Click “using DST rule”
4. Click “Change”

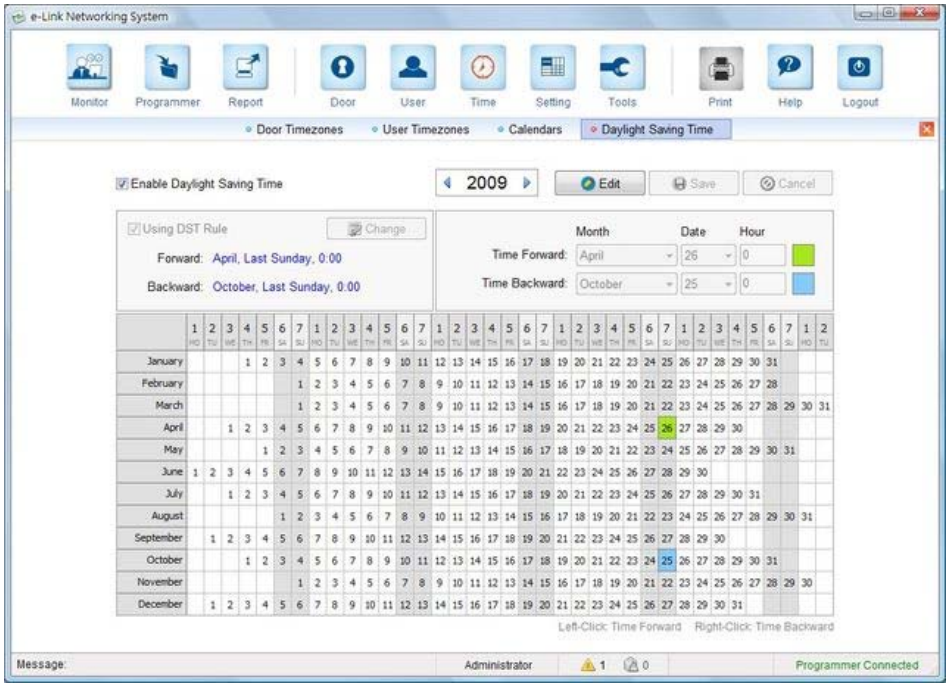


6. Set the month which DST starts (ie April, Last Sunday, 0) Please note Hour means “which hour” to begin DST rule.

7. Set the month which DST ends. (ie October Last Sunday, 0) Please note Hour means “which hour” to end DST rule.



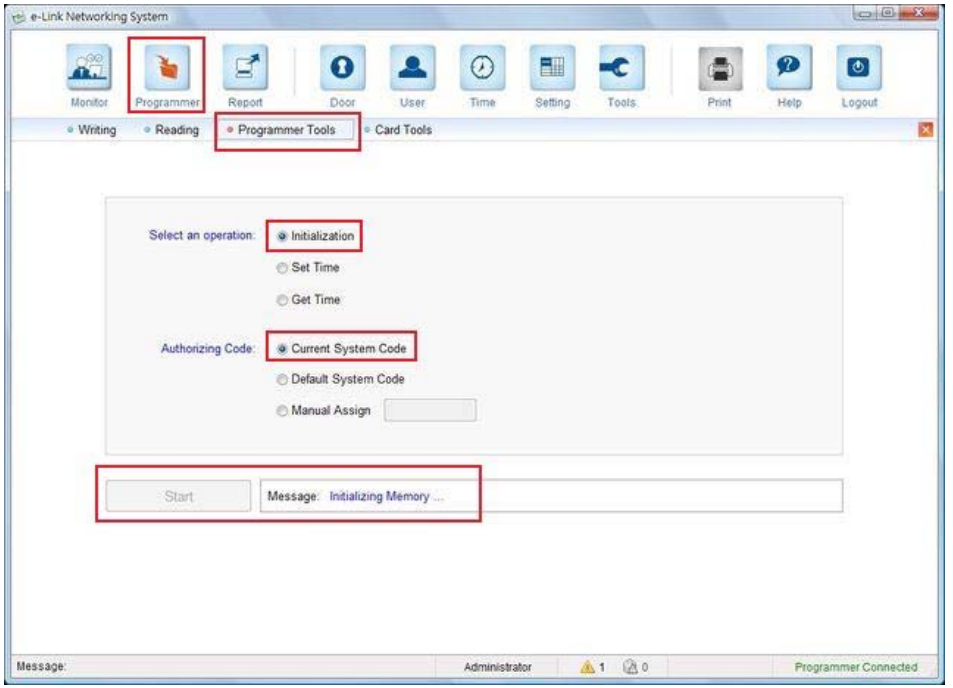
8. Click “Save” and make sure again the DST rules you set is correct. (result of set the date wrong will make the lock work in wrong DST time zone, thus the Audit Trail time will not be correct)



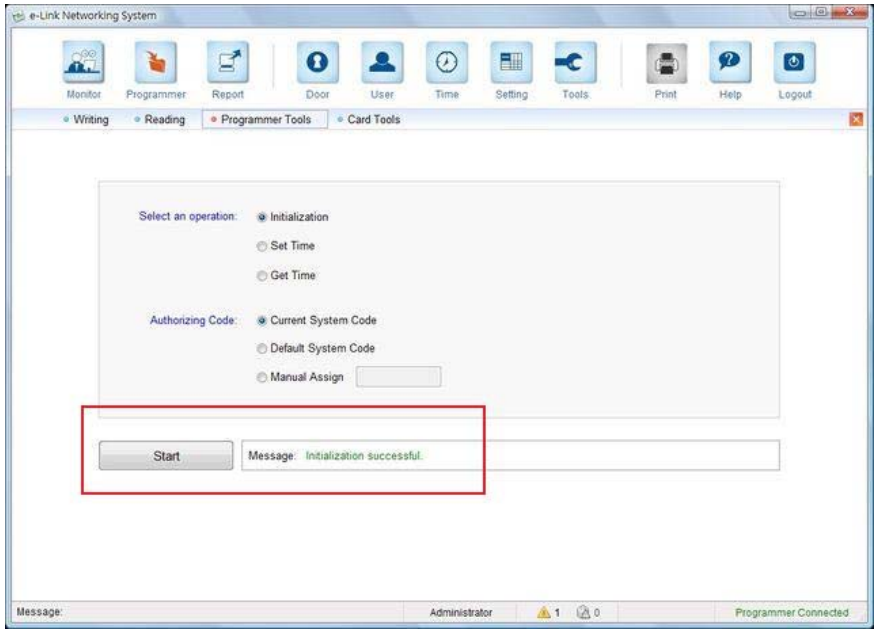
Initialize the Programmer

1. Load 3pc of AAA 1.5v batteries to the back of the Programmer, then connect the White USB cable to the back of the Programmer, and the other end to the PC USB port.

2. Go to “Programmer > Programmer Tools” in the software menu.
3. Choose “Initialization”
4. Choose “Current System Code”
5. Click “Start” button to begin initialization for Programmer.



6. Make sure the status message is “Initialization successful”, and keep the Programmer connected to PC.

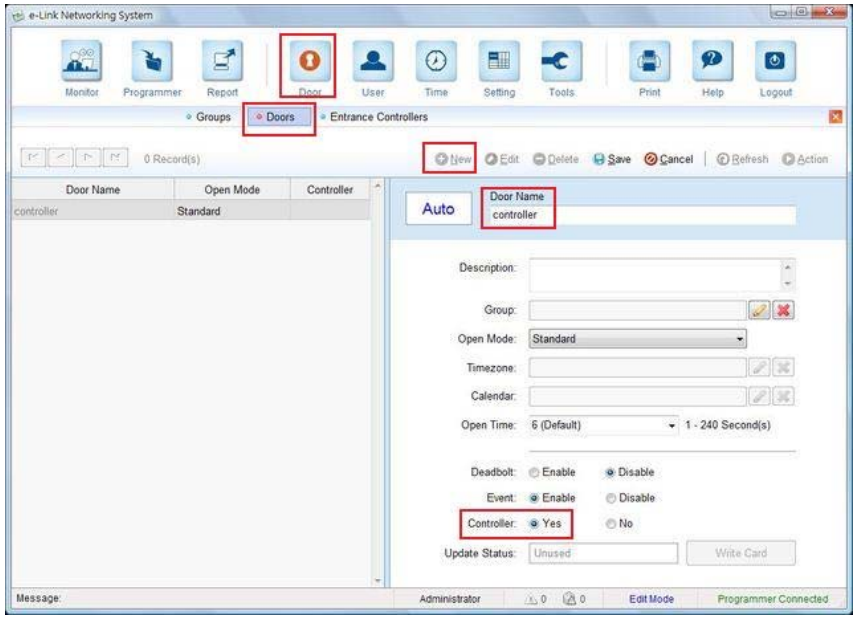


Click here if the programmer can not be initialized sucessfully.

Part 3: SETUP WALL CONTROLLER & WALL READER

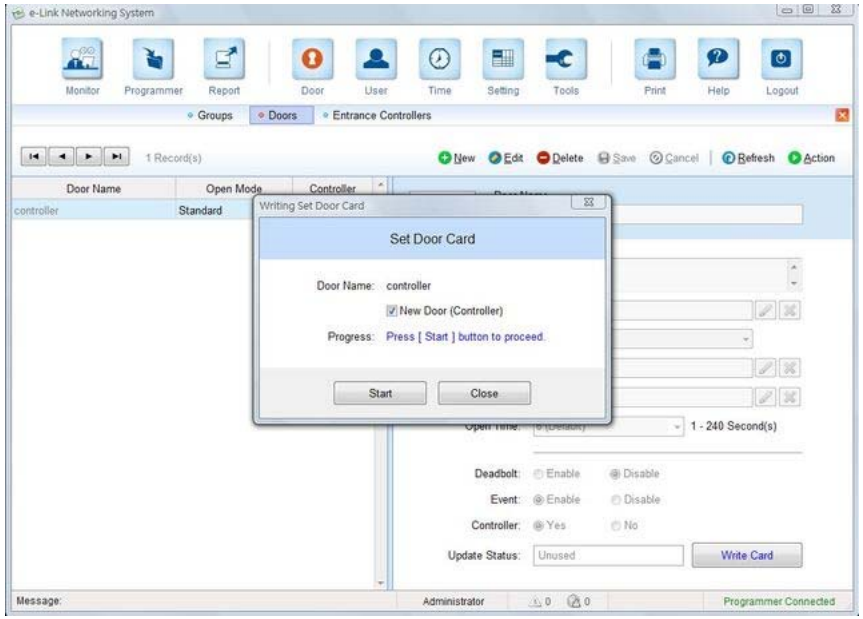
Issue Door No. Card

1. Go to “Door > Doors” menu
2. Click “New”, then type a name for “Door Name”
3. Select “Controller” to YES.
4. Click “Save” to finish



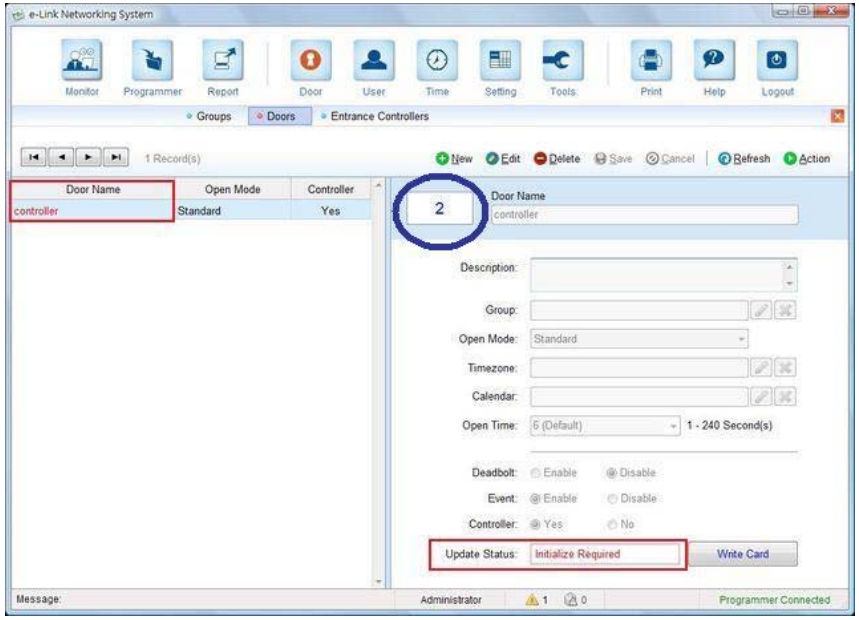
5. Place a unused Mifare classic card to top of the Programmer.

6. Click “Write Card” at bottom right side, a little window will pop up.
7. Click “Start” from the poped up window.



Click here if the card can not be issued.

8. Once the card is successfully issued, the little window will disappear and the “Update Status” at the bottom will be “Initialized Required” and the color of the Door Name will be Red. Keep this Door No. card you just issued with you and follow Part 3.

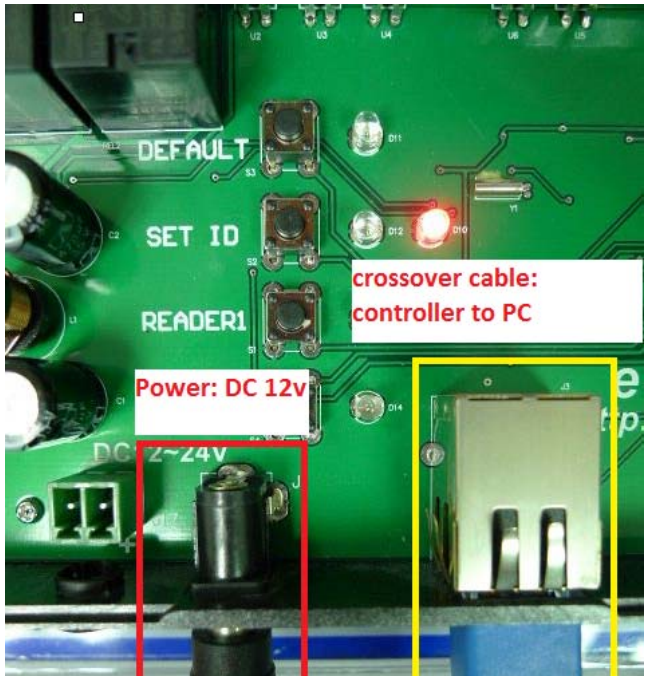


The purose of issuing door no. card is to write the door ID into the card (blue circle below), and later on we will present this card to the reader, so the reader knows which ID it is. (In this example, the door ID is #2, in real case it will not be the same)

Hardware setup

1. If you have purchased e-Link demo kit from WaferLock, please take out the plastic set which holds the e-Link Wall Controller and the e-Link Wall Reader.

2. Please prepare an adptor (DC12v) and plug into the power jack from controller. Then, connect the blue crossover ethernet cable to controller and PC. Please note when connect the power to the controller, the “D10” LED will keep flashing.



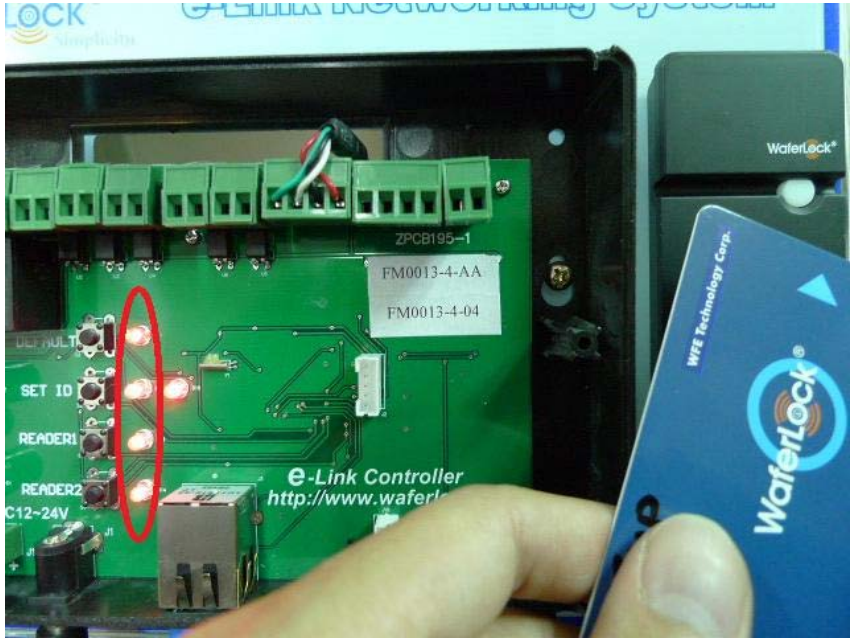
3. Press “Reader 1” bottom on the controller.
(note the Reader 1 LED lid up, and Wall Reader LED also lid up)

4. Use the Door No. Card which you have issued and induct to the reader. This way you will set this reader as Reader 1. (note the LED will be OFF on the reader once the card approached it.)

5. Press “Set ID” button on the controller, and the LED will lid up.

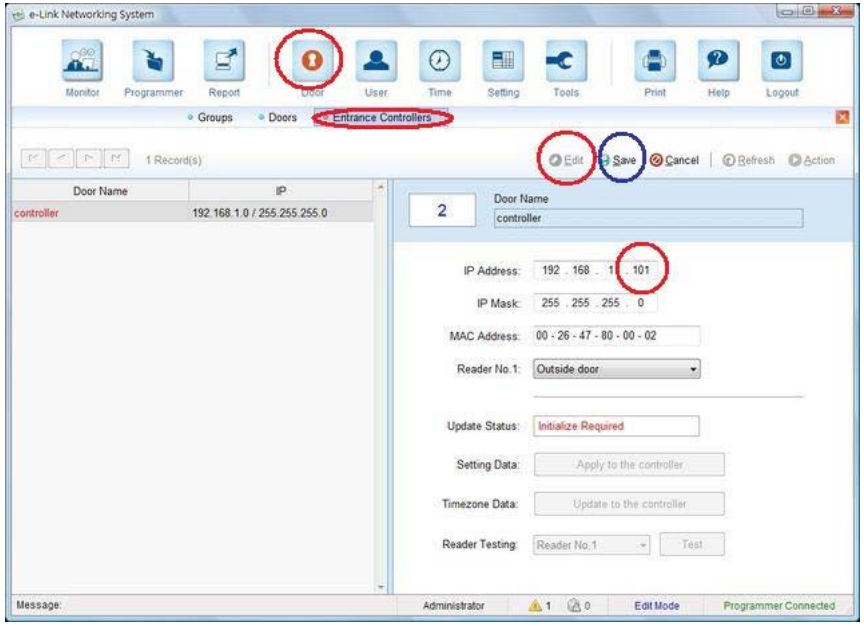
6. Present the Door No. card to the reader, and note all LED will be ON.

This way the door no. card which carry (ID #2) will be written to the reader.



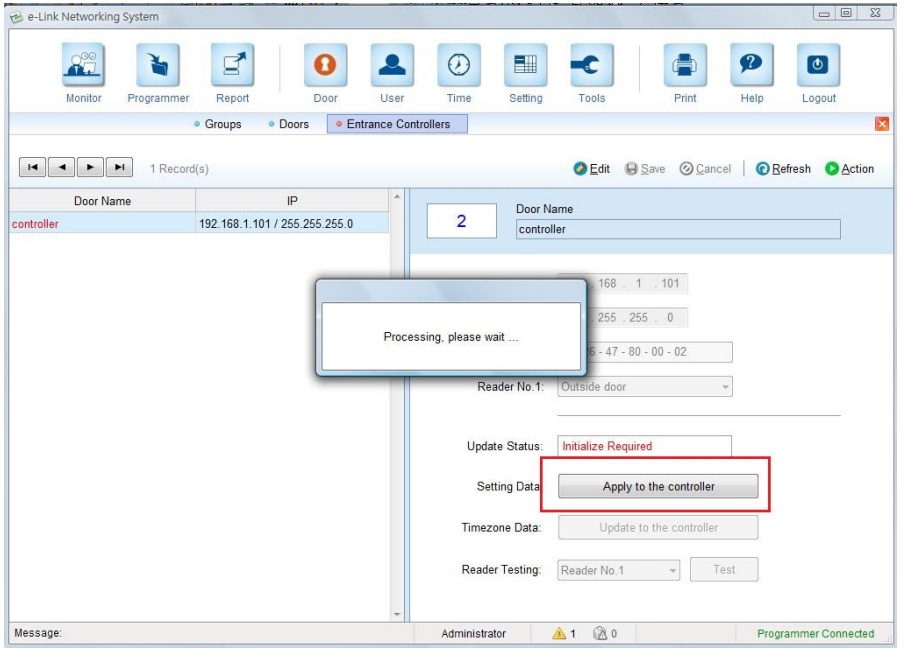
Setup IP & Timezone data for controller

1. Go to “Door > Entrance Controller”
2. Click “Edit”
3. In this example picture, we are going to set the IP address as 192.168.1.101.
4. Click “Save” to save the settings.

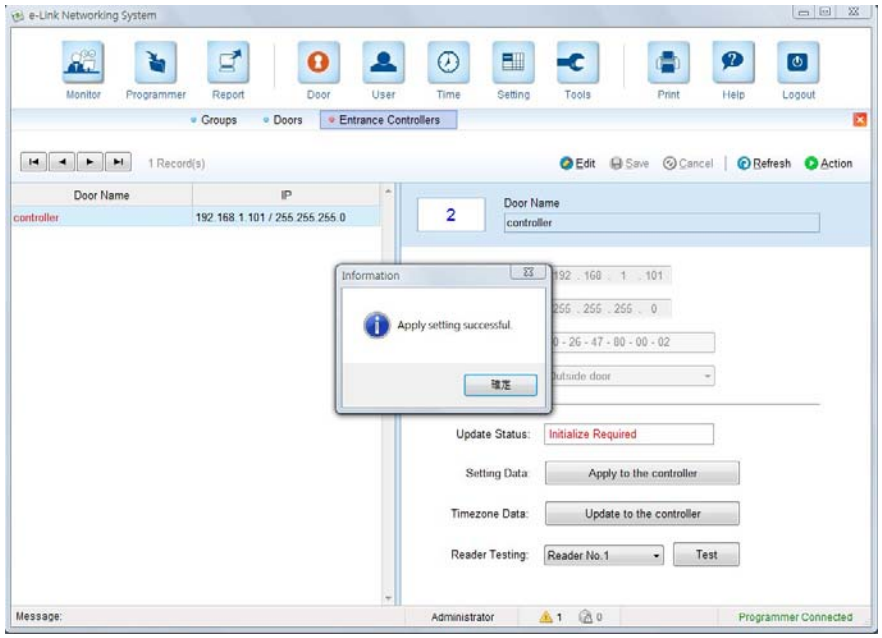


5. Click “Apply to the controller”

With this operation done, it will apply the Controller and Server’s IP address, Mac address, and Submask into Controller memory. So the controller will know what IP it is and what IP the server is.



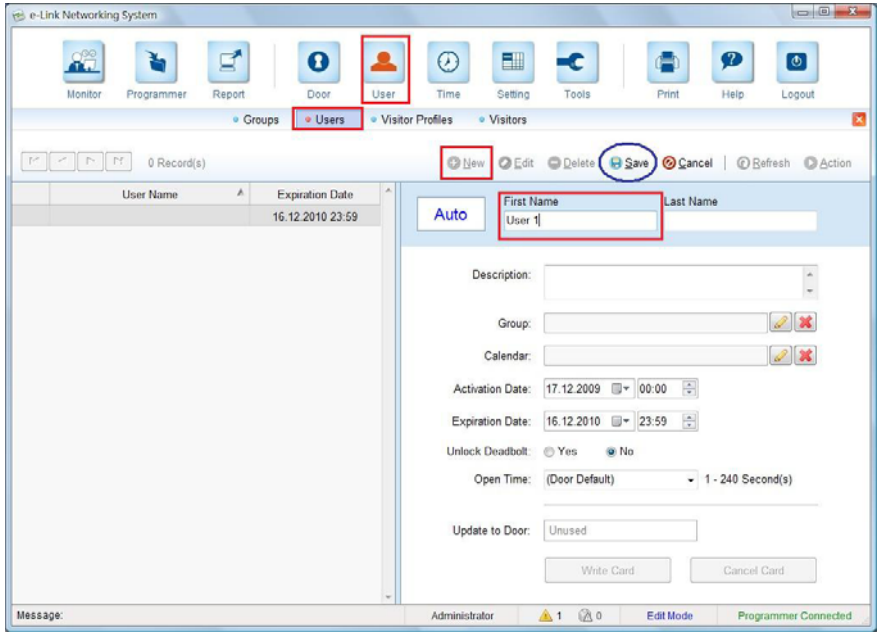
6. If applying is succeeded, the message will say “Apply setting suceessful”



Click here if Apply to the controller is failed.

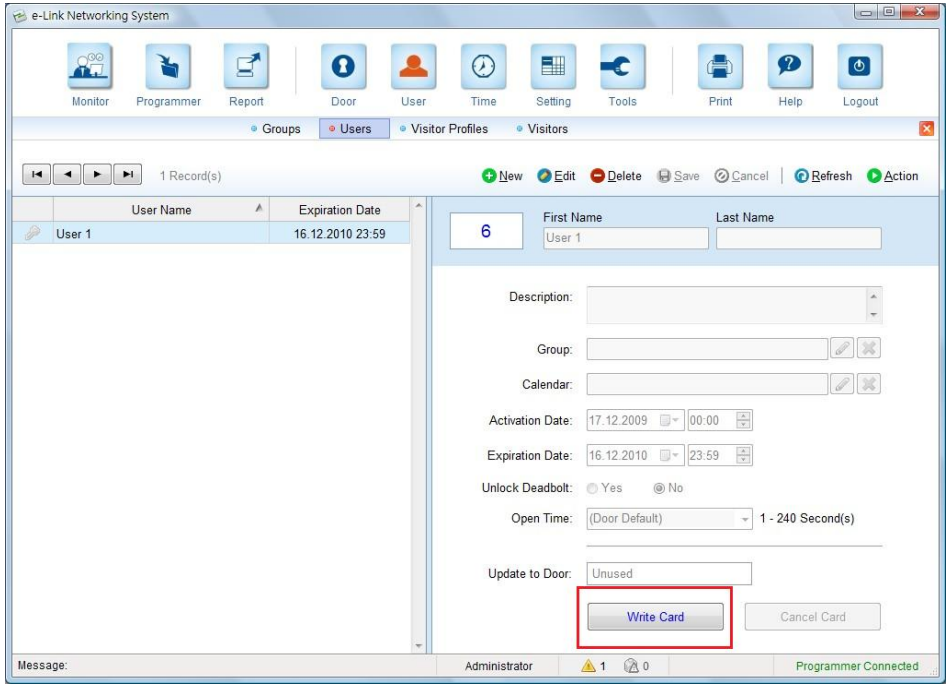
Create User Card

1. Go to “User > Users”
2. Click “New”
3. Give a name to First Name. (the example will just use User 1)
4. Remain all other settings as default setting (no need to change).
5. Click “Save”

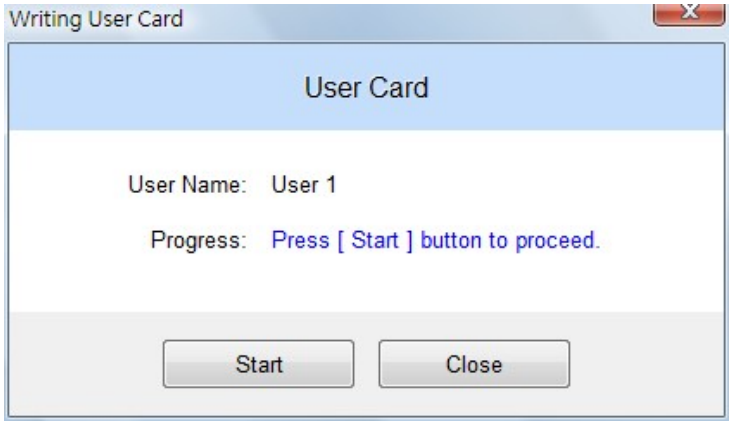


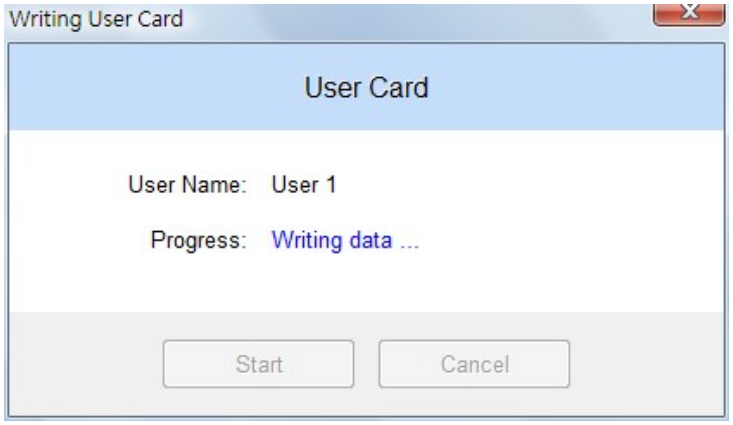
6. Place an unused card on top of the Programmer.

7. Click “Write Card” at the bottom.



8. A little window will pop up, and starts writing User Card. If the card is written sucessfully, the little window will hide and return the screen back to User menu.

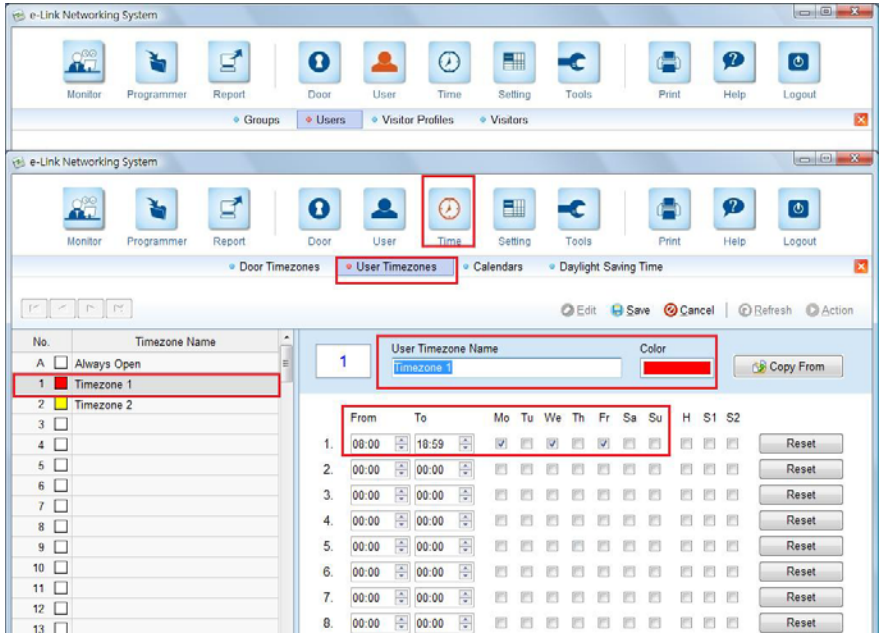




Click me if failed to issue User Card.

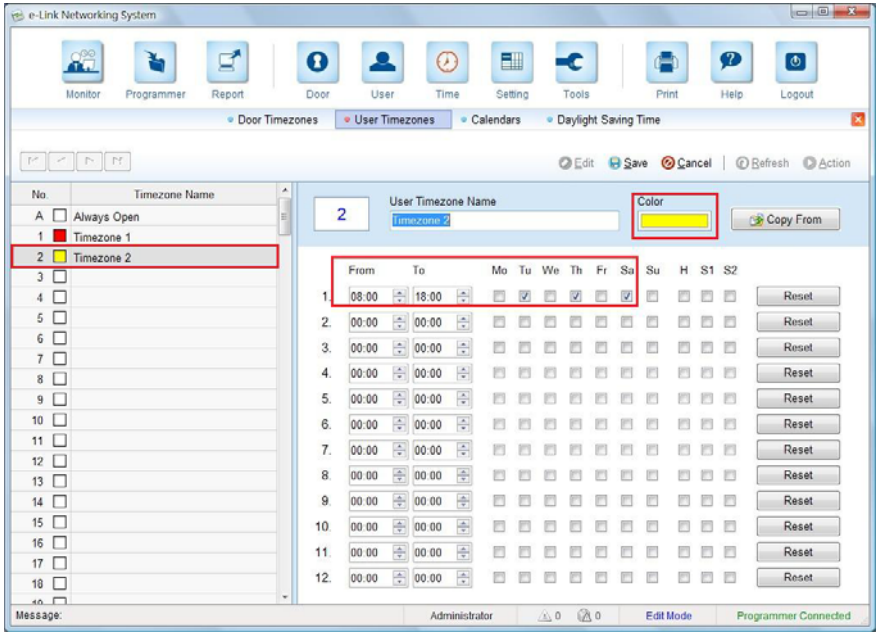
Setup User Timezones

1. Go to “Time > User Timezones”
2. Double click on left menu #1, then “Timezone 1” will pop up automatically.
3. Select a color in “Color” area.
4. For this example below, we are going to give a time period, please type **08:00 to 18:00** and select **Mo, We, Fr** (*please note in reality case this can be altered according to your need*)
5. Click “Save” after done.



6. In this example, we are going to create another time zone, please double click on #2, give a color to this time zone, and give time period from **08:00 to 18:00**, then select **Tu, Th, Sa**.

7. Click “Save” after done.



- The purpose of selecting color is to view each time zone easily.

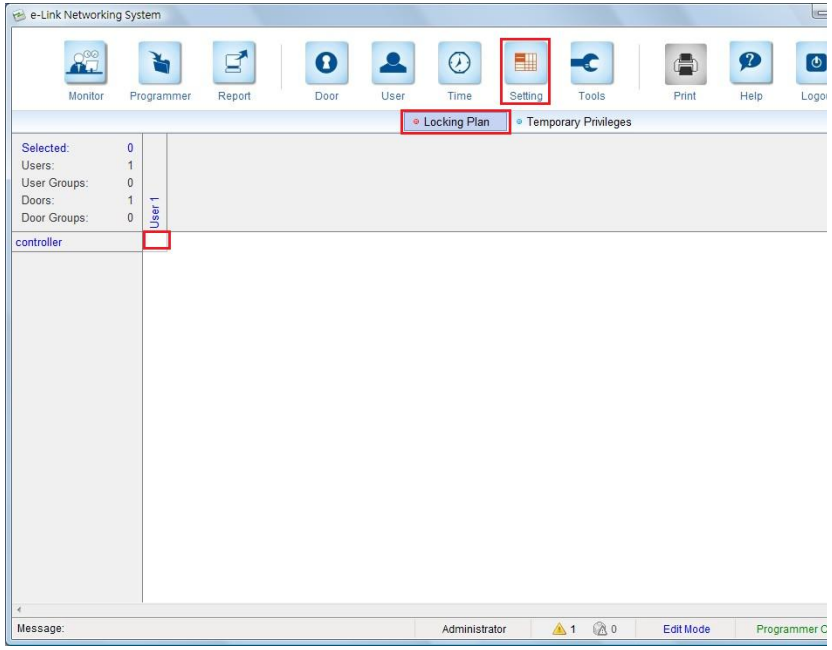
Setup Locking Plan

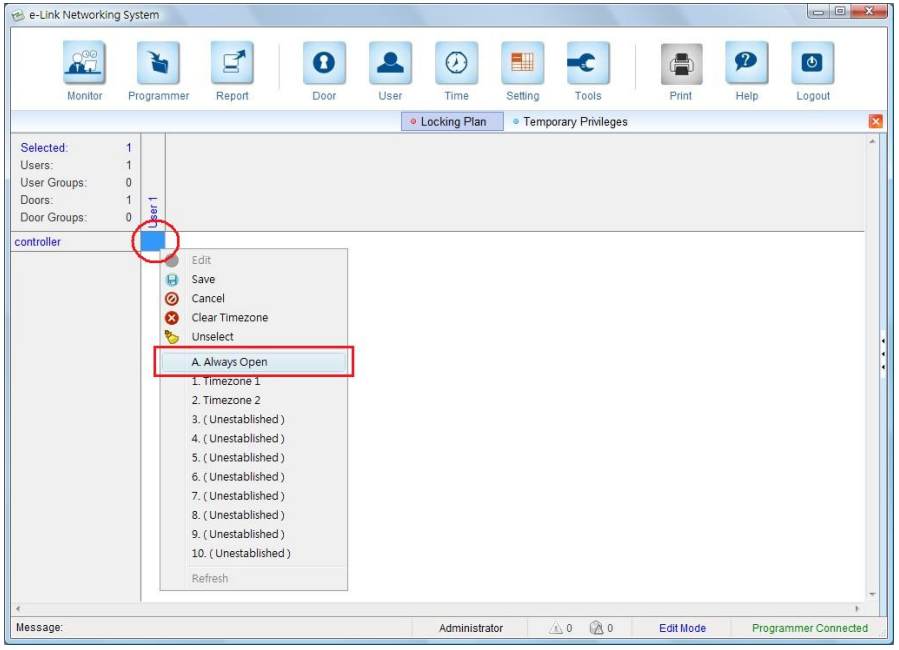
1. Go to “Setting” , select “Locking Plan”
2. Double click on the cell box. You will enter Edit Mode automatically.

3. Select the cell box with left mouse click.

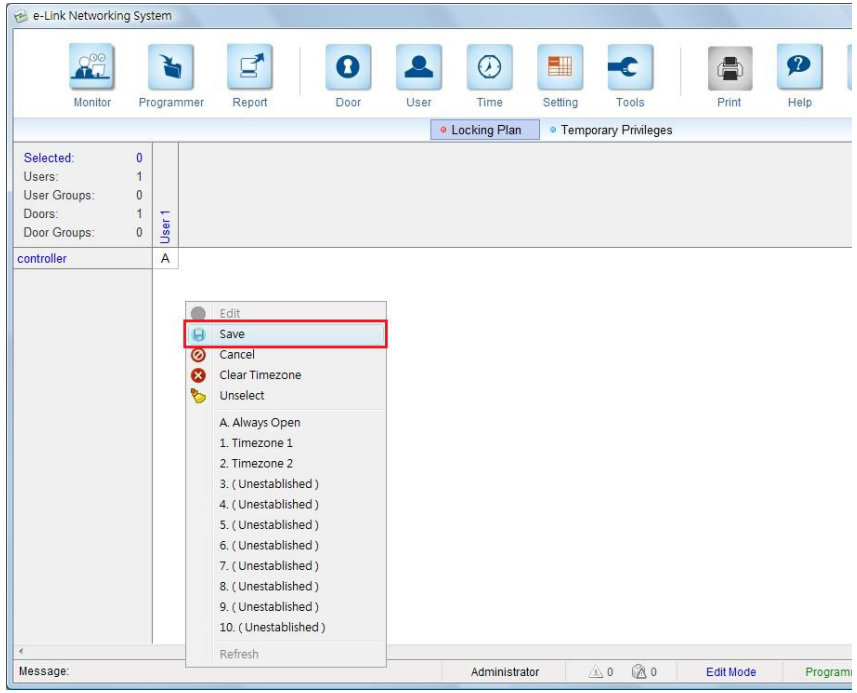
4. Right click on right mouse on anywhere in this screen to pop up the shortcut functions menu.

5. Left Click “A. Always Open” in this shortcut menu.



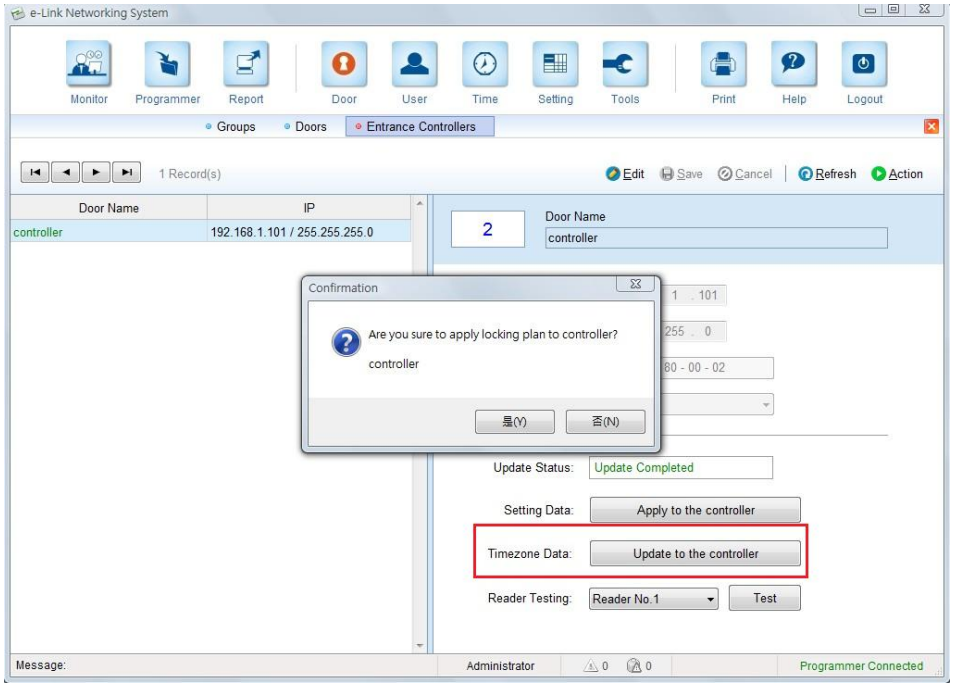


6. Right click again then select “Save” from the shortcut list.

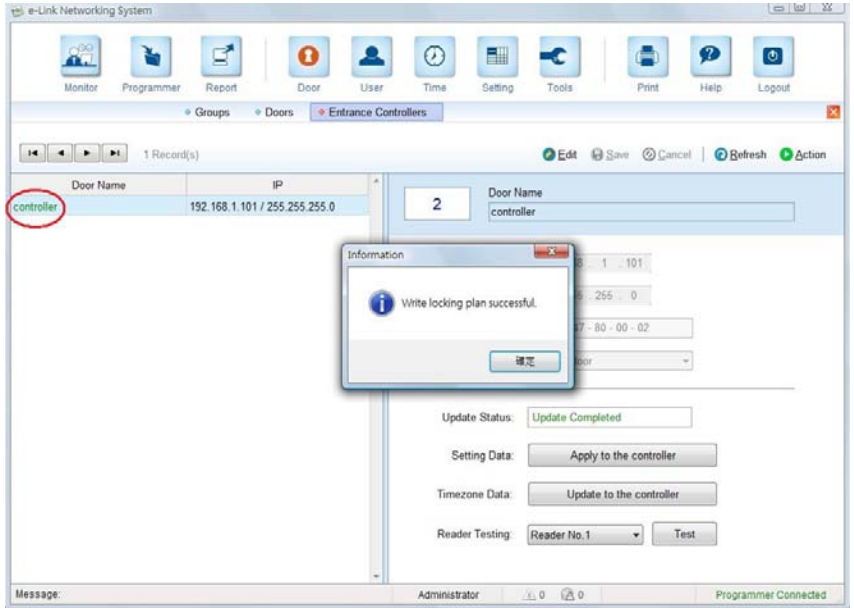


7. Go back to “Door > Entrance Controllers”

8. Click “Update to the controller” and select “Yes” to update Locking Plan to the controller.



9. Once “Write Locking Plan Successful” and the color of the Door Name become “green”, it means everything is updated to the controller and ready to use.



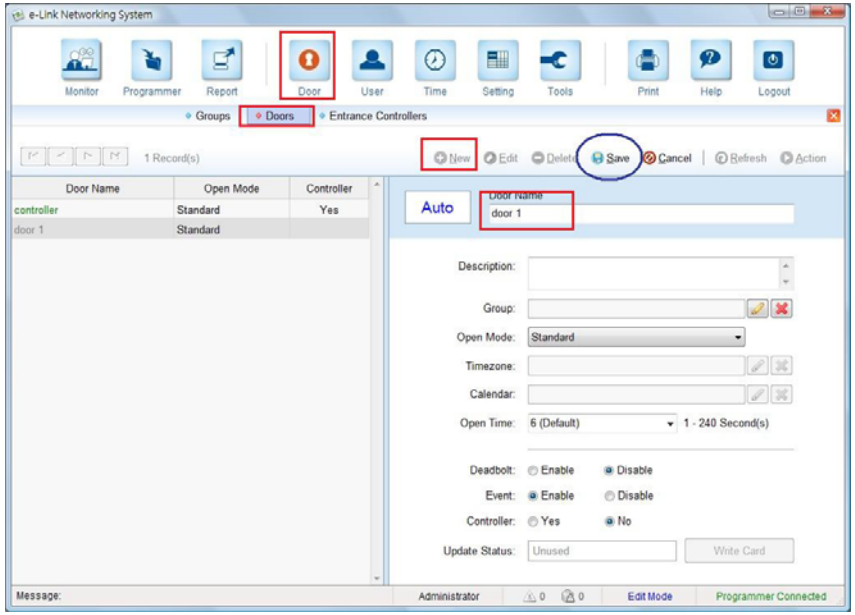
Note:

- Please note: when the controller is online with the server computer, the e-Link software will update everything (all command) to the controller automatically every 5 minutes. This is to prevent when the controller is disconnected with the server computer, the controller can still use its database stored inside its memory and function normally.
- When the controller is in offline mode, it can memorize 1024 events, after 1024 it will overwrite the 1st event. As soon as the network is back online, these events will be transferred back to the server computer, and it can be searched in Report menu.

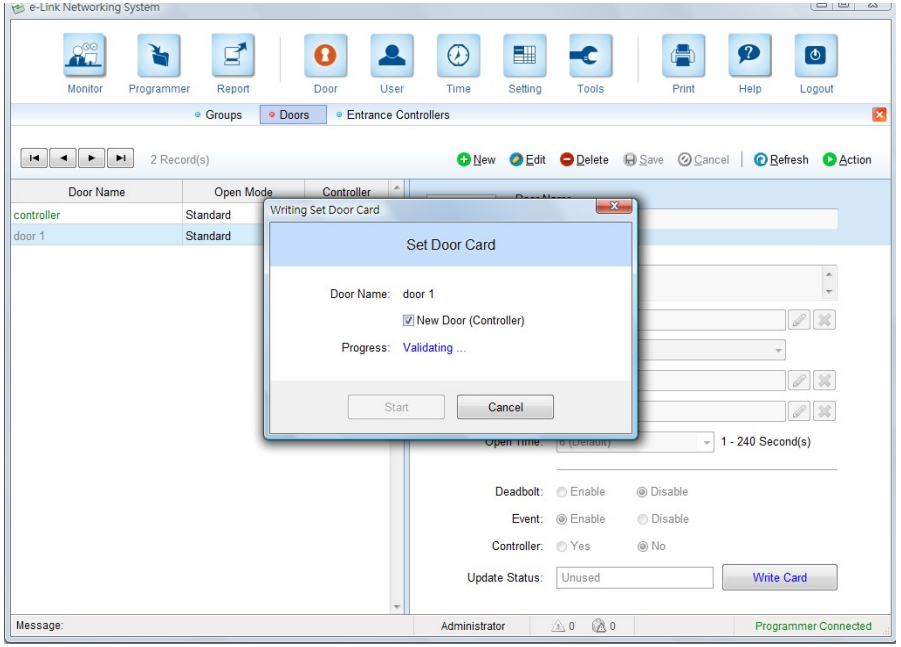
Setup the lock

Creating the locks:

1. Go to “Door > Doors”
2. Click “New” then type a door name in the blank.
3. Click “Save” to finish the setting.



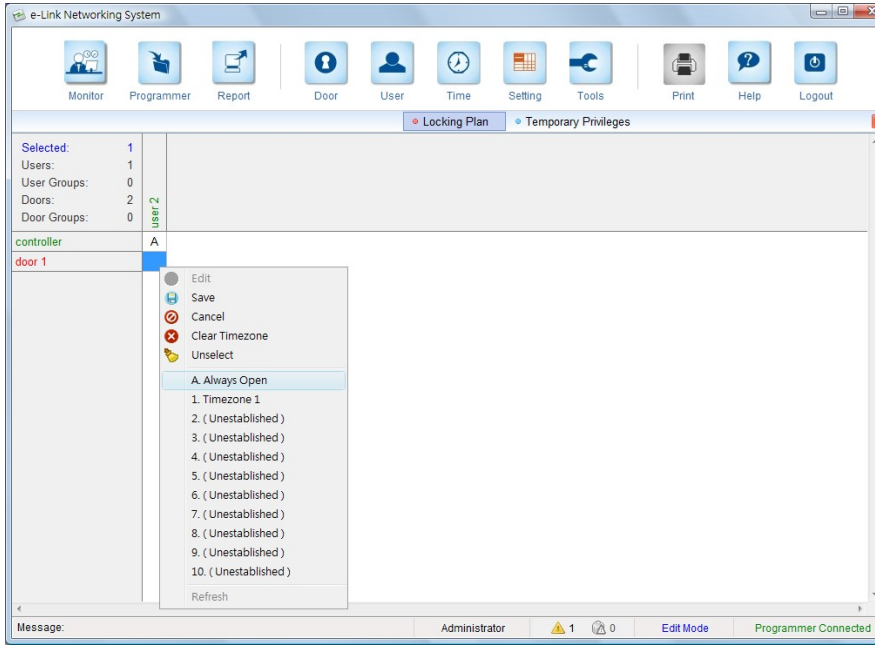
2. Place an unused card on top of the programmer, then click “Write Card” on bottom right, then click “Start” to write a Door No. Card.

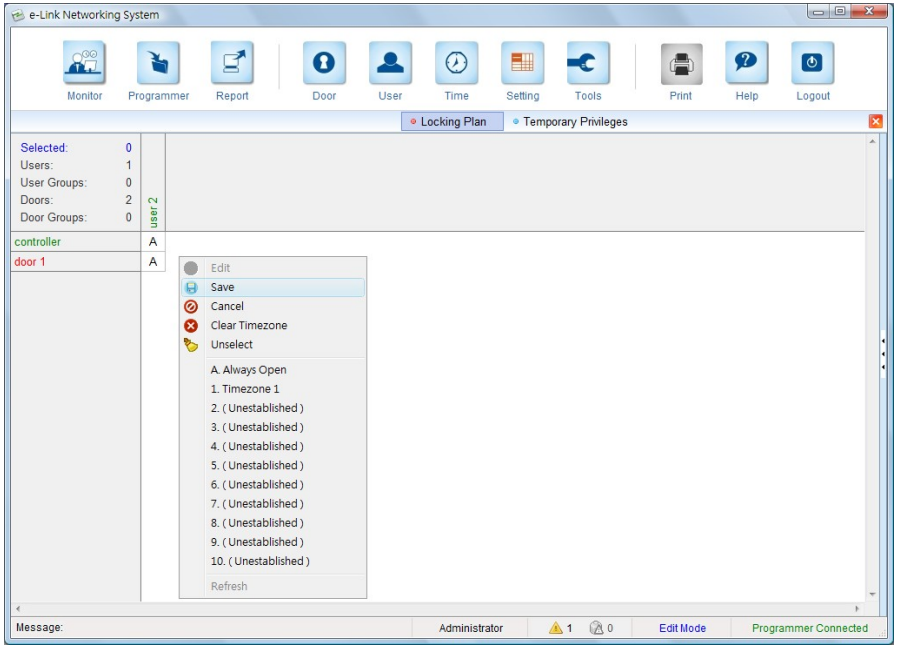


3. After successfully written the card, please induct it to the cylinder or lock you need to setup. Once hear a “beep” and “green LED” flash one time. That means the lock is set with a door number.

Setup lock's Locking Plan

1. Go to "Setting > Locking Plan"
2. Left double click the cell box, then right click to pop out the short cut menu.
3. Left click to select "Always Open" from the list.
4. Right Click again and select "Save" to save the setting.

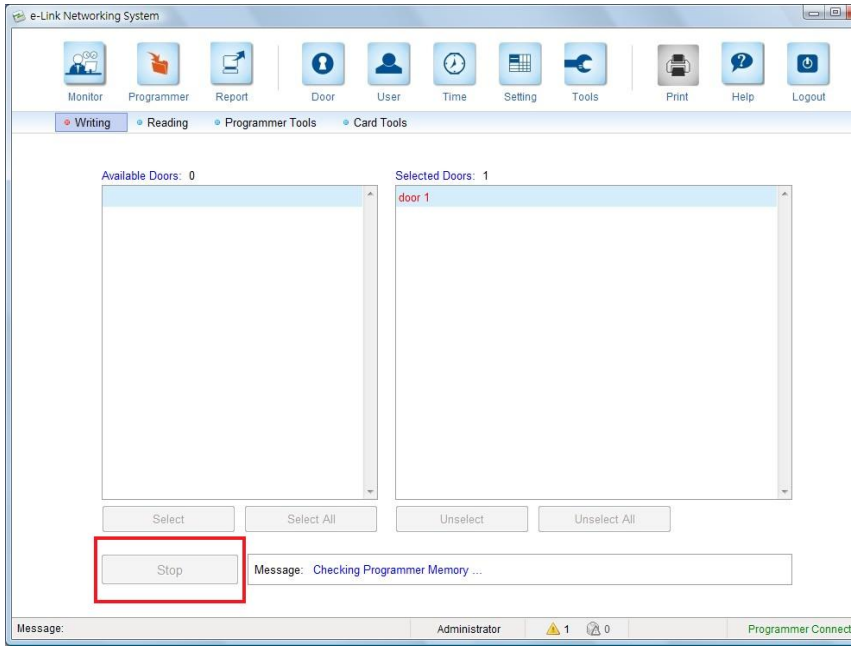


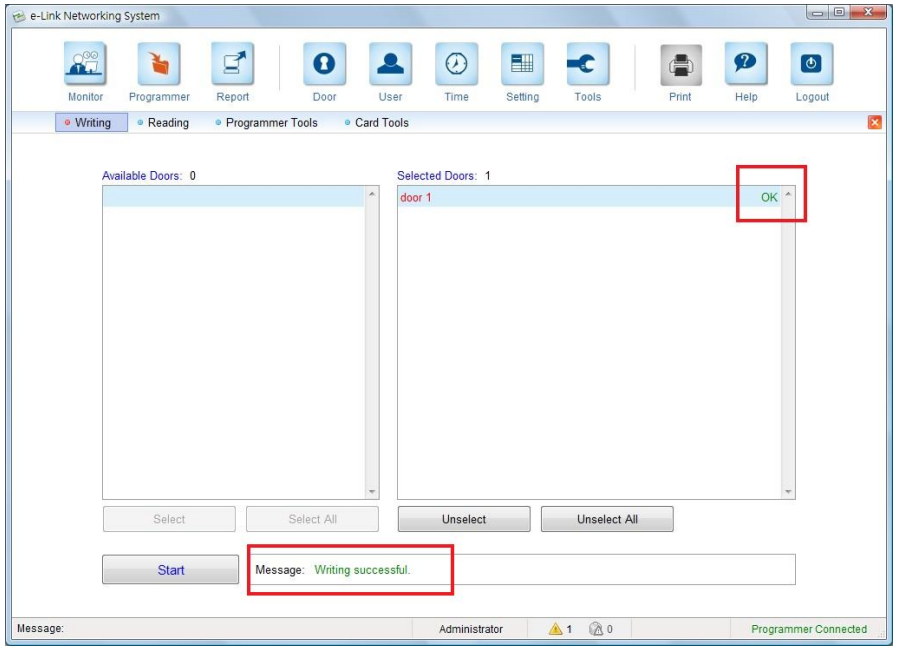


Write Settings from PC to Programmer

1. Go to “Programmer > Wrting”
2. The locks need to be written with Programmer will be selected automatically to the right side window, and displayed as red color.
3. Make sure Programmer is connected to the PC, click “Start” to begin writing door settings to it.

4. When writing is done, the Message will display “Writing sucessful” and the status of the lock will be written as “OK”





Write Settings from Programmer to the lock

1. Make sure the programmer is installed with 3pc of AAA alkline batteries, then unplug the “White USB” cable away from the programmer.
2. plug in the “Black USB” cable to the programmer.

3. In the other end, plug in the black USB cable to the USB connector of the lock.

Note when plugging the USB hole, the lock will beep for 2 seconds.

4. Press “Write” button on the Programmer.

5. If written sucessfully to the lock, the Programmer will lid in blue LED and buzz a long beep.

Note: It will take few seconds for completing the Writing progress from Programmer to Cylinder. If the lock has already Write with programmer before, the next time will only update the lock’s time when pressing Write again .

Part 4 Updating settings through Wall Reader by User Card

Testing the locks with User Card

1. Take the User Card which you created earlier, and approach the reader from the lock once, if the User Card is valid, the lock will respond 1 flash of green LED and beep 1 time. Approach the card to the lock few more times to play around the lock.

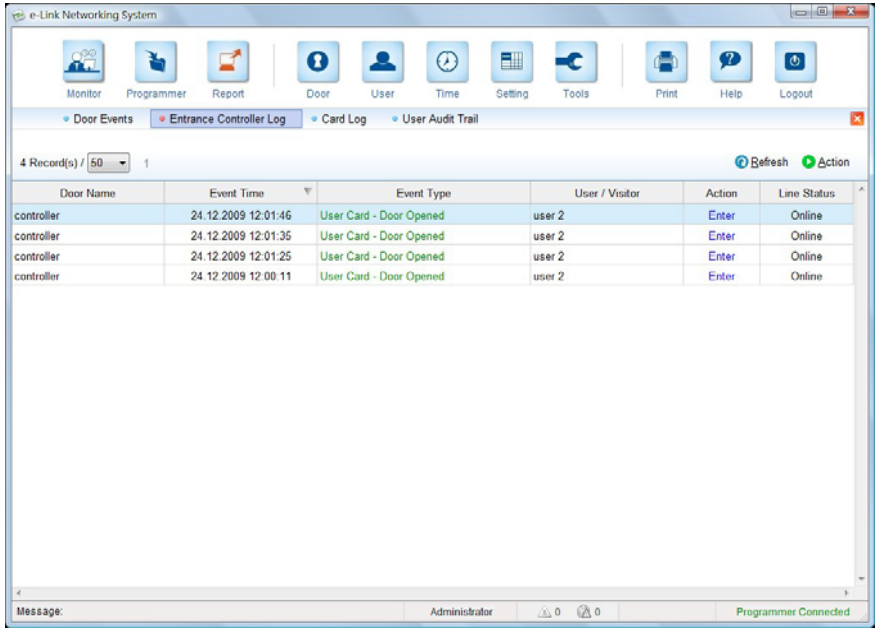
2. Take again the User Card, and approach to the wall reader, make sure put the User Card onto the reader until hearing 1 long beep, Approach the card to the lock few more times to play around the reader.

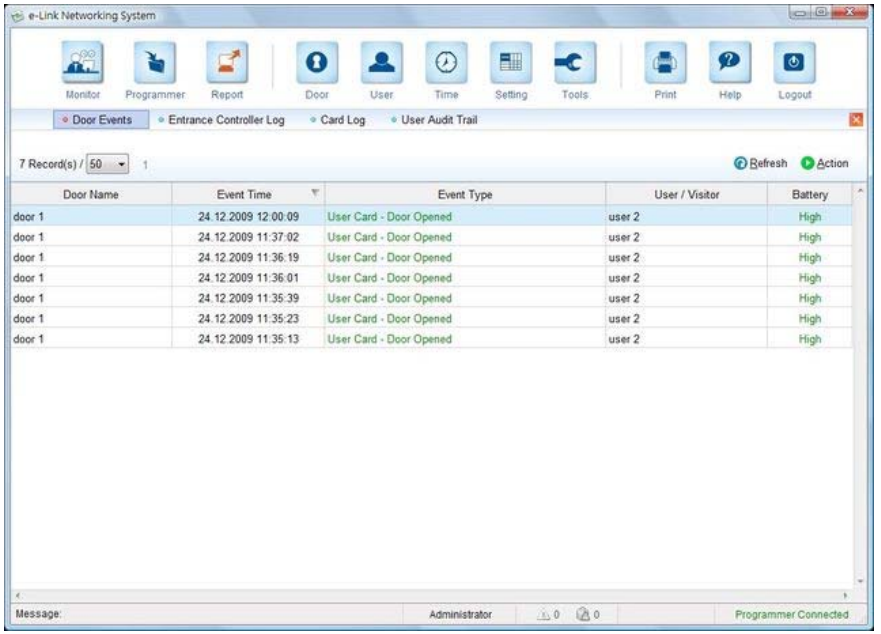
Please read me if the user card does not work on wall reader. (Please read About Wall reader section.)

Checking Audit Trail Report

1. Go to “Report > Entrance Controller Log”
2. In this menu, you will see each event that the the user have accessed the controller door. The events can be sorted according to your need. (ie. If you wanted to sort by Event Time, click “Event Time” to do so)

3. Go to “Door Events”, this menu will display all the events that the user access a lock. It will also display the lock’s battery status, if the lock is in low battery status, it will show “Low” to remind the operator.

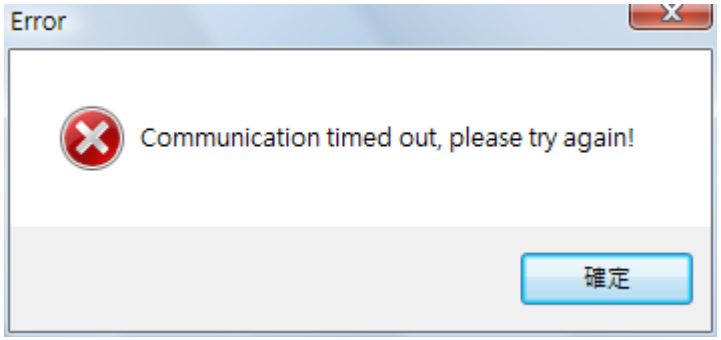




Part 5 Frequent Asked Questions

About Controller

Q1: If there's error message when Apply to the controller, please double check the following:



A1: When applying IP is failed or timed out, please check:

- Check if the IP address and subnet mask you have input to the controller is correct. (check if the IP you input is in the same network segment as the server PC)
- Check if the ethernet cable is well connected between PC and the controller.
- Check if the controller have been setup already with a "Set Door Card" (see Part 3 Setting Up Wall Controller and Wall Reader.)
- Check if the fire wall setting have been setup as the manual instructed. (see Part 2 By Passing Firewall)
  - If you have turned off any 3rd party firewall program while adjusting the firewall setting, please reboot after you have closed the firewall program in order to take a complete effect.

About Wall Reader

Q1. The wall reader flash in quick red LED. What does it mean?

A1. It means the controller is disconnected with the server PC, so the wall reader is flashing red LED to remind operator to check the connection. Please note during disconnection, the controller can still memorize 1024 events, and once the connection is back, the controller will send back the events to the server PC to update the database. The wall reader can still function normally during offline mode.

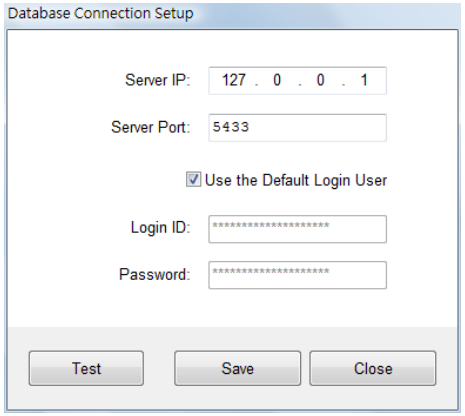
Q2. The wall reader does not accept the User Card, and flash red + warning buzzer, what does it mean?

A2. If the user card you are holding is not accepted by the wall reader, please check the following:

- The user card doesn't have access right to the reader. Please check Locking Plan in the software.
- The user card is deleted from the software, please double check User > Users menu.
- The card's system code is different from the wall reader's system code. Please double check what was the software's sytem code in Tool menu > System Security menu. And try use "Apply to the controller" function in Door > Entrance Controller menu to update the system code again to the controller. (Once the Apply to the controller function is done, the controller will write system code to the wall reader). If after using "Apply to the controller" , the user card still can not access the wall reader, that means the card's system code is different and can not access unless the card get its system code update by Programmer again. (please use Programmer Tool > Card Tools > Change system code function to update the card's system code).

About Software

Q1. Database Connection Setup when computer restarts

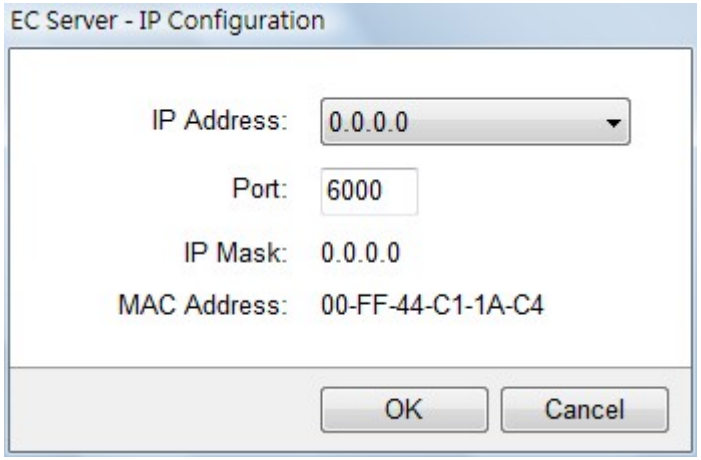


A1: When the Windows is loading during computer restarts, sometimes the Database Connection Setup window would appear, it is because the network function is still loading during startup of the Windows, as if the EC Server Agent have already loaded before the network started up, the Database Connection Setup would appear to ask user where to connect. You could follow this way to double check:

a. Check the ethernet cable is well connected from PC to the Controller.
b. If using switch hub or router, make sure these devices are powered on and working fine.
c. Make sure there is no software or hardware firewall blocking.
d. Make sure the PC server computer is started up, and the EC Server services is started in the server computer.
e. Make sure the Server IP and port is correct to use for e-Link system.
f. Press Test see if you could connect to the server, if OK, please click Save to save the setting.

If with above ways you still could not connect to the server computer, please ask your IT or local distributor for help.

Q2. I can not see the IP from EC Server Agent's "IP Setting", what can I check?



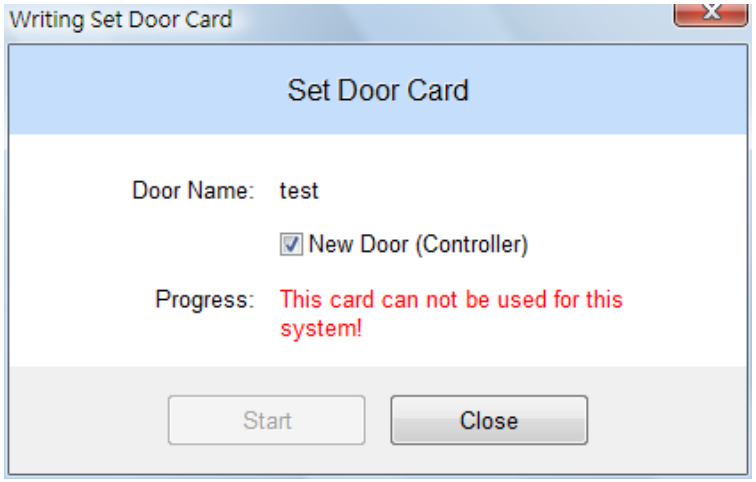
A2. Please check the following for this problem:

- Check if the Server is started up and online.
- Check if the server computer is installed well with the e-Link software. (EC Server must be installed into the Server PC)
- Check if there's any other firewall program blocking.

Q3. I have placed a card on the Programmer, but I keep getting error message when trying to issue Set Door Card ?

A3:

a) If you are getting the following message while writing a Set Door Card, please note the card's system code is different than the e-Link software. Please double check what was the card's system code, or try use a blank Mifare Card to issue Set Door Card.



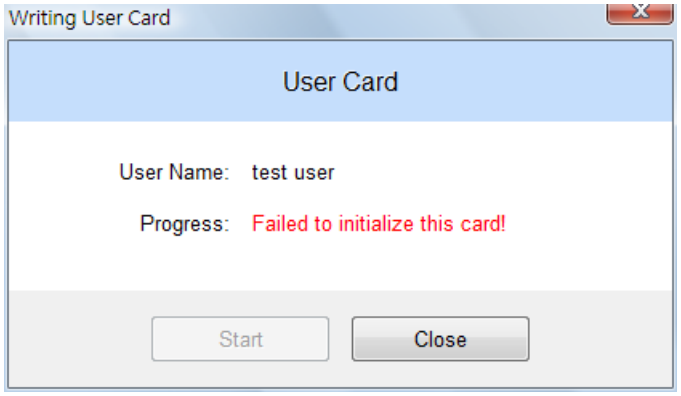
b) If you are still fail to issue card, please try reset the card in Programmer Tool > Card Tool > Card Resetting.

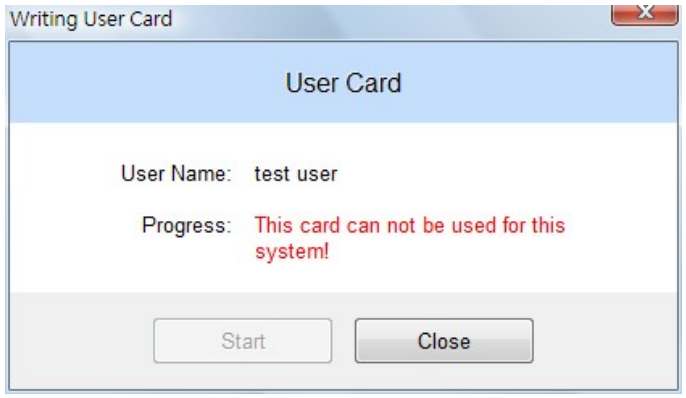
Q4. I am trying to issue a user, but the following error message keep coming out?

A4:

a) 1. **Failed to initialize this card** or **This card can not be used for this system**: With this message, it means the card which you are going to write as User Card has a different system code than the software. Please double check the card's system code before writing, or use a blank card to issue the user card.

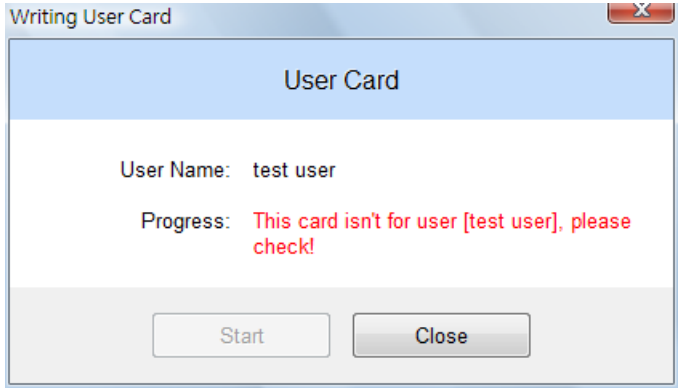
2. Please use Programemr tool > Card Tool > Card Reset function to reset the card first if this card was belong to somenone else and needs to be re-write to another user.





b) This card isn't for user xxxxx, please check: this means the card you are issuing is belong to someone else's card.

If needed, please use Programmer Tool > Card tool > Card Reading to read out the User Card's name.



About Programmer

Q1: The software can not detect the Programmer, what can I do?

A1: Please check the following:

- Disconnect and Reconnect the White USB cable from Programmer.
- Disconnect and Reconnect the White USB cable from PC.
- Try with another USB port to see if the software could detect the Programmer.

If all not working with above, please try with another computer to double check, or contact your distributor for help.

About Cylinder

Q1: The lock does not react to any User Card, what can I check?

A1: There are many ways to check for such problem, please try each of the following:

Software side:

- Please make sure the system code in the software is match with the lock's system code.
  - If you have forgot what was the lock's sytem code, contact your local distributor for help.

Hardware side:

- Make sure the cylinder still have battery power.
- Use another existing user card to approach the lock, see if the lock can work with that card.
  - If Yes, change a new card for the user. (The problem may be a defect card/tag.)
  - If Not, the lock's sytem code may be different with the card you are issuing.